

# Keysight N108xA-Series IEEE 802.3 Ethernet KR/CR Compliance and Debug Application

# Notices

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# 1 Introduction

This book shows you how to install and setup the N108xA-Series compliance application. Once the procedures in this document are completed, you can begin compliance testing. Information on using the application is included in the application's help system.

## NOTE

Your license determines where you install the compliance and FlexDCA applications. The compliance application's licenses (N1081A, N1082A, N1083A, N1084A) allows you to install the application on either a specific PC or a specific 86100D DCA-X instrument. This selection is made at the time that you redeem your license.

---

## NOTE

If you plan to run all of the application's IEEE 802.3 Ethernet KR/CR tests, you will need install each of the N1081A, N1082A, N1083A, and N1084A licenses. Refer to [Table 1](#) on page 6 for a listing of the measurement options activated for each license.

---

## To Install the Application

- 1 Select from one of three different test-equipment configurations shown in the following pages. The configuration that you select depends on where the compliance applications is installed, as determined by the licenses, and whether you are using the N1010A FlexDCA Remote Access application.
- 2 After locating the figure that matches your setup, follow the recommended procedure.

## Recommended Equipment

[Table 2](#) on page 10 lists the recommended equipment. The equipment you select depends on the supported test equipment that is available to you.

## NOTE

The application *cannot* be installed on an 86100A, 86100B, or 86100C.

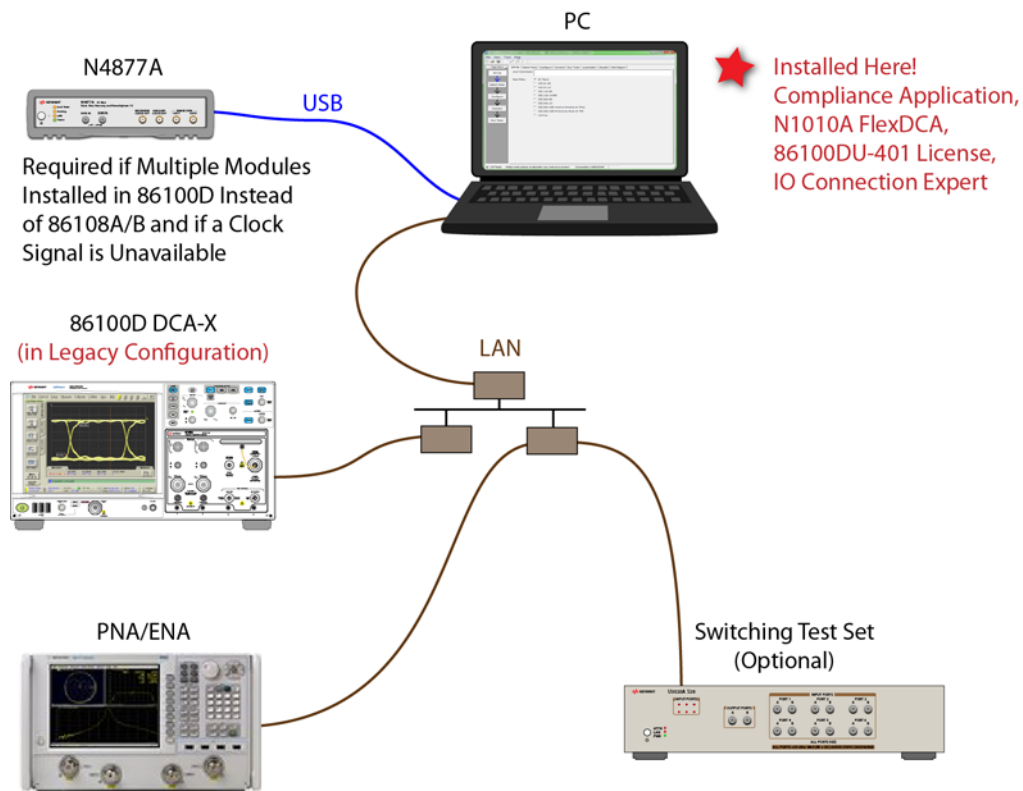
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**Table 1** Available Clauses Versus Installed License

IEEE 802.3 Designation	Installed License			
	N1081A	N1082A	N1083A	N1084A
10GBASE-KR	√			
40GBASE-KR4	√			
40GBASE-CR4			√	
100GBASE-CR10			√	
100GBASE-KR4				√
100GBASE-CR4				√
XLAUI		√		
CAUI		√		
XLPPi		√		
CPPI		√		

## Installing Both the Application and N1010A FlexDCA on a PC

★ If your licenses allow for installing the software as marked by the red star in this diagram, go to [Chapter 2 on page 11](#).



**Figure 1** N1081A-Series Application and N1010A FlexDCA Installed on PC

## Installing the Application on a PC without FlexDCA

★ If your licenses allow for installing the software as marked by the red stars in this diagram, go to [Chapter 3 on page 33](#).

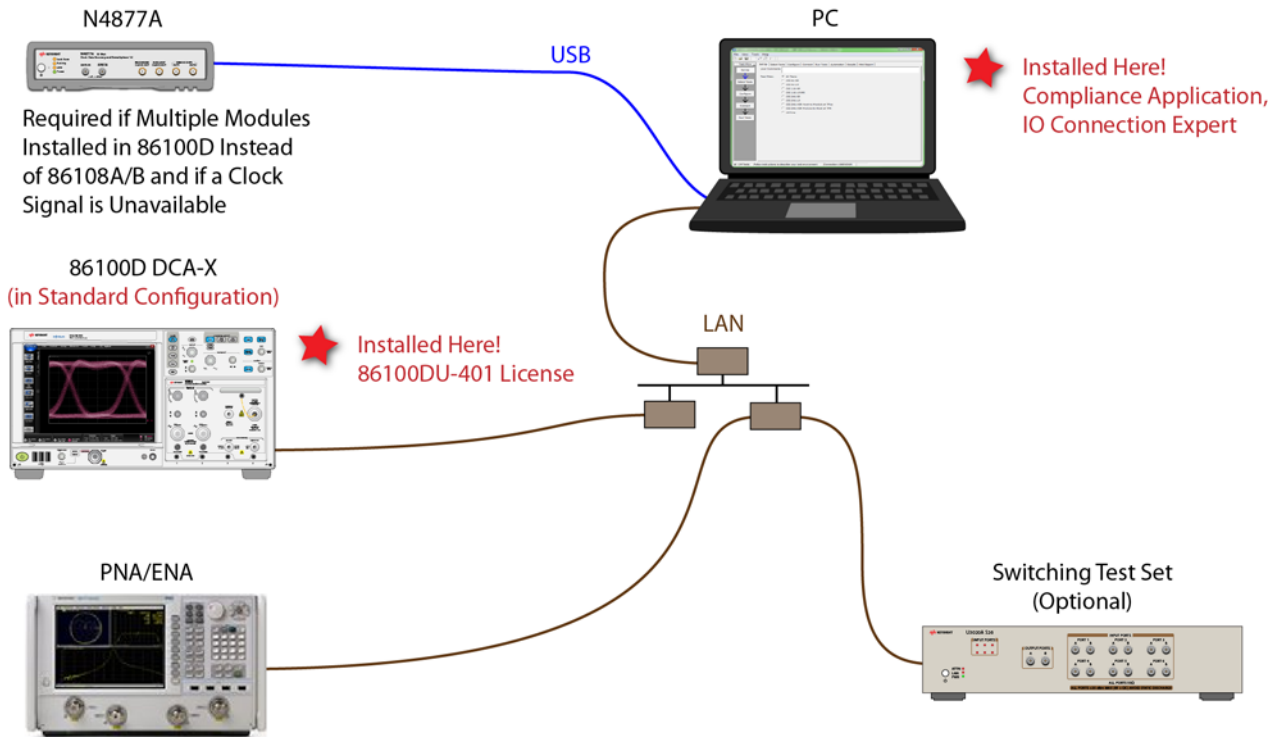
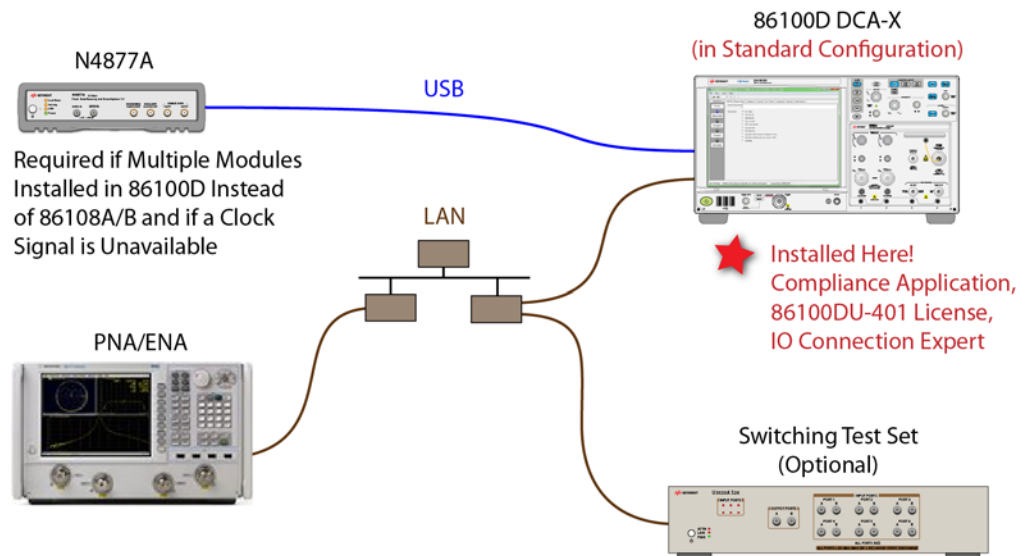


Figure 2 N1081A-Series Application Installed on PC.



## Installing the Application on the 86100D

★ If your licenses allow for installing the software as marked by the red star in this diagram, go to [Chapter 4 on page 55](#).



**Figure 3** N1081A-Series Application Installed on 86100D

## Recommended Equipment

**Table 2** Recommended Equipment

Equipment	86100D Module Configuration	
	Single Plug-In Module Setup	Multiple Module Setup
86100D Oscilloscope	86100D DCA-X* with options: 86100D-ETR Extended Trigger 86100D-200 Enhanced Jitter Analysis 86100D-201 Advanced Waveform Analysis	
86100D Plug-In Module	86108A or 86108B with options LBW/HBW and 216/232.	N1045A, 86117A, or 86118A-H01 dual receiver. 86107A precision timebase (any option). N4877A-216/232 (for clock recovery.†)
Software	N1081A, N1082A, N1083A, and N1084A IEEE 802.3 Compliance Application.  86100DU-401 Advanced Eye Software (for measuring jitter at PRBS31). A version of the 86100DU-401 is automatically installed with the N1081A-series application.  Keysight I/O Libraries, 16.3 or higher  Option N1010A-SIM InfiniiSim DCA Waveform Transformation Toolset. Provides InfiniiSim Transform operators to FlexDCA.	
Performance Network Analyzer (PNA) or Economy Network Analyzer (ENA)	Any 4-port model with frequency range of at least 19 GHz (ENA also covers the 1 MHz termination mismatch test) The network analyzer is used to perform return-loss measurements.	
Switching Test Set ( <i>optional</i> )	Keysight U3020A S26 DC to 26.5 GHz, or BitifEye BIT 2100	
Matched Cable Set	86108B-CA2 or 86108B-CA3 ( <i>quantity 1</i> )	
Phase Trimmers	86108B-PT2 or 86108B-PT3 ( <i>quantity 2</i> )	
DC Blocks	86108B-DC3, N9398C, N9399C, or 11742A ( <i>quantity 2</i> )	
Pick-Off	N/A	N4915A-015 ( <i>quantity 2</i> )
Test Adapters ( <i>optional</i> )	Visit <a href="http://shop.wilder-tech.com/category_s/42.htm">http://shop.wilder-tech.com/category_s/42.htm</a>	

\* FlexDCA version A.02.51 or greater

† If you have access to the clock for the device, you can connect the clock to the 86100D's Trigger input instead of using the N4877A.

## 2 Installing Both N108xA and N1010A FlexDCA on a PC

Follow the instructions in this chapter when you are installing both the compliance application and the N1010A FlexDCA application on a PC. Although a version of the 86100DU-401 software is automatically installed with the compliance application, you must purchase and install a license for the 86100DU-401.

### NOTE

When you redeemed your compliance application license, you selected to install the application either on a specific 86100D or a specific PC.

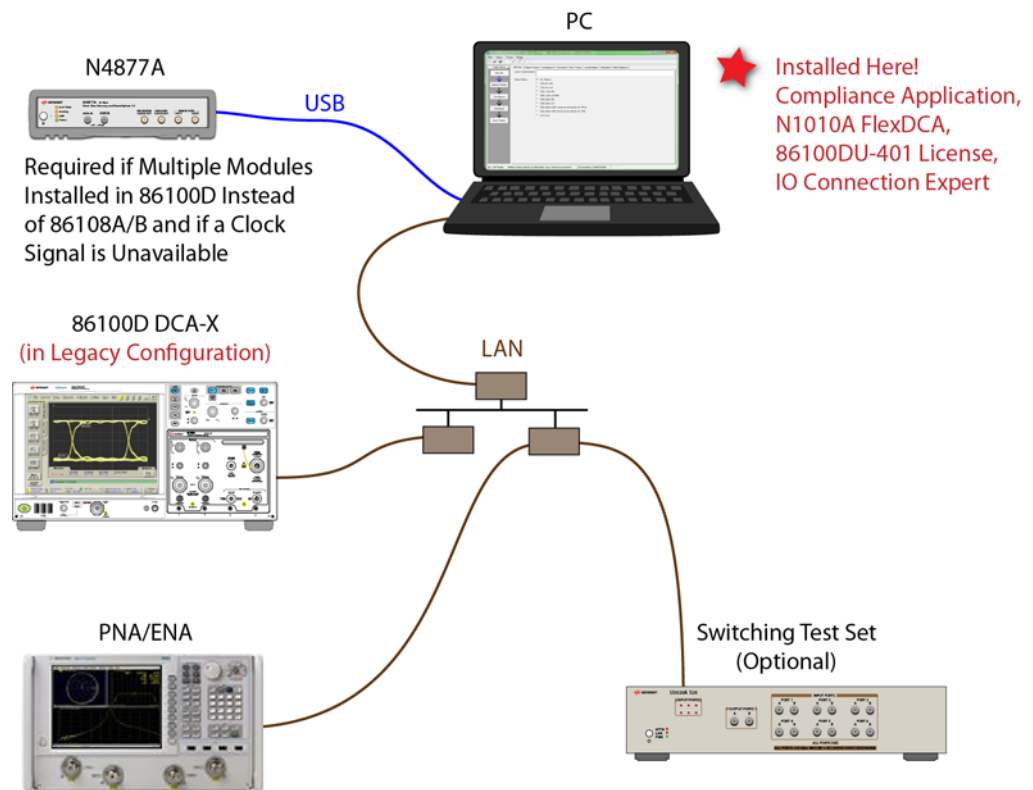


Figure 4 N1081A-Series Application and N1010A FlexDCA Installed on PC

**NOTE**

If you do not connect a network analyzer, you will not be able to perform the return-loss tests.

## Step 1. Connect the Equipment

- 1 Install one of the module combinations listed in **Table 3** into the 86100D.
- 2 Connect the equipment as shown in **Figure 4** on page 11 and turn on all of the instruments.

**Table 3** 86100D Module Solutions

Installed Module Configurations	Single Plug-In Module Setup	Multiple Plug-In Module Setup	Description
86108A/B	√		The 86108B can have either options LBW or HBW plus 216 or 232.
N1045A, 86117A, or 86118A-H01 86107A (any option) N4877A-216/232*		√	N4877A-216 provides a maximum data rate of 16 Gb/s. Option 232 provides a maximum data rate of 32 Gb/s.

\* If you have access to the clock for the device, you can connect the clock to the 86100D's Trigger input *instead* of using the N4877A.

## Step 2. Install the I/O Library Suite

- 1 In your internet browser, go to [www.keysight.com/find/iosuite](http://www.keysight.com/find/iosuite) and download the Keysight I/O Library Suite.



**NOTE**

Keysight's I/O Library Suite is free software that automatically detects instruments connected to your PC and configures the interfaces. It reduces system setup and configuration time. The compliance application requires I/O Libraries Suite 16.3 or higher.

- 2 Install the I/O Library Suite on the PC.

## Step 3. Install the Compliance Application

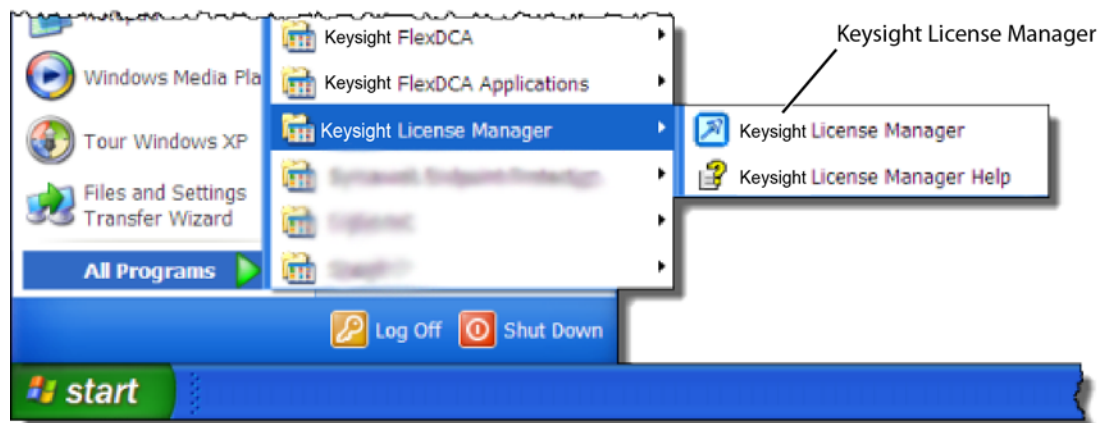
The following steps install the compliance application and its license as well as the license for the 86100DU-401. A version of the 86100DU-401 is automatically installed for use with the compliance application.

- 1 Go to [www.keysight.com](http://www.keysight.com) and search for and download the N108xA-series application. Install the application on the PC for which you redeemed the license.

### NOTE

When you redeemed a compliance application license, you selected to install the application either on a specific 86100D or a specific PC.

- 2 Place the license file that you received from Keysight in a folder or accessible memory device.
- 3 If not already done, purchase an 86100DU-401 license. Place the license file that you receive from Keysight in a folder or accessible memory device.
- 4 If the N1010A FlexDCA is running, close FlexDCA.
- 5 On the PC's Windows Start menu, locate the Keysight License Manager and start it.



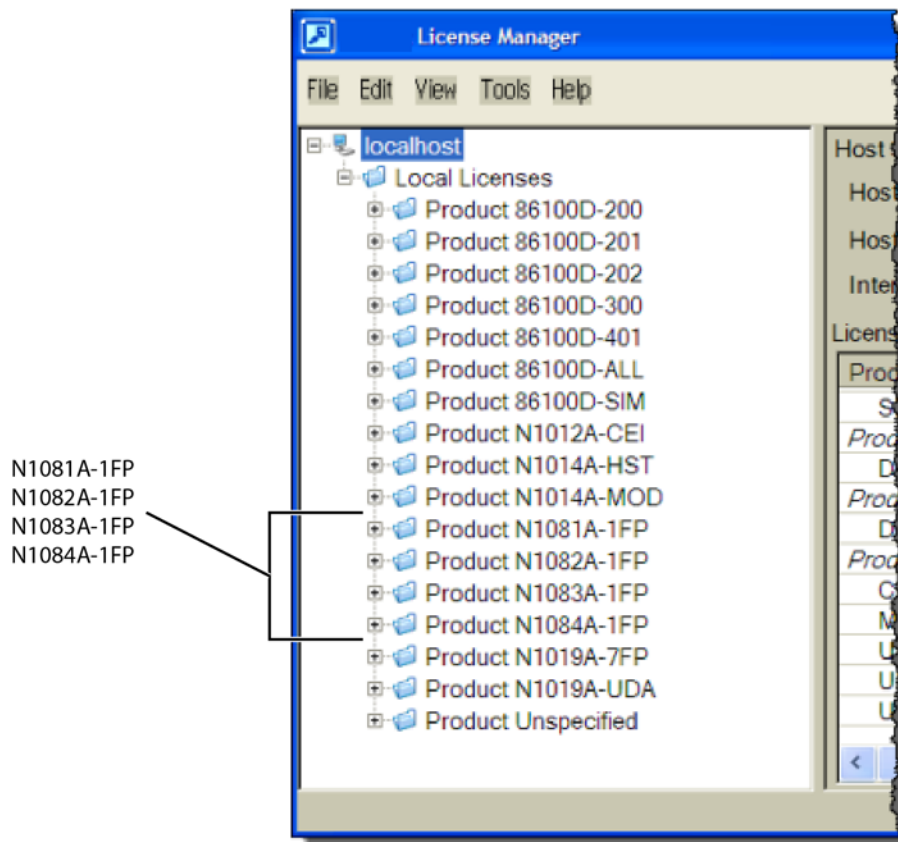
**Figure 5** License Manager in Windows Start Menu

- 6 In the Keysight License Manager, select and right click the compliance application listing and click **Install**. If the compliance application is not listed, click **File > Install**.
- 7 In the **Install License File(s)** dialog box, locate your license file and click **Open**. You may have up four licenses: N1081A, N1082A, N1083A, and N1084A as shown in [Figure 6](#) on page 14.

### NOTE

If you are using one of the switching test sets (switch matrix), you will also need one of the N1081A-7FP, N1082A-7FP, N1083A-7FP, or N1084A-7FP licenses.

## 2 Installing Both N108xA and N1010A FlexDCA on a PC



**Figure 6** N1081A-Series Application Licenses in Keysight License Manager

### NOTE

If you plan to run all of the application's IEEE 802.3 Ethernet KR/CR tests, you will need install one each of the N1081A, N1082A, N1083A, and N1084A licenses.

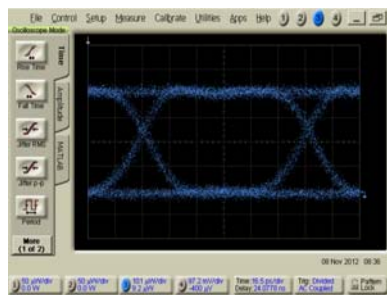
- 8 Select and install the 86100DU-401 license.
- 9 Close the Keysight License Manager.

## Step 4. Connect N1010A FlexDCA to the 86100D

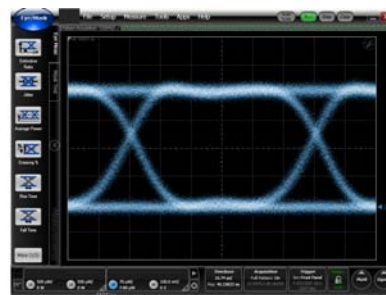
- 1 On the 86100D, click **Help > About** and locate the System Information field in the dialog box. Scroll the field to view the **Computer Name** entry. You can also obtain the computer name from the Windows System properties.
- 2 Record the Computer Name (host name) as you will need this name later in this procedure.

86100D Computer Name: \_\_\_\_\_

- 3 Close the About dialog box.
- 4 Do the following steps to place the 86100D in Legacy configuration:
  - a Click **File > Exit** on the 86100D's user interface.
  - b On the Windows Start menu, click **All Programs > Keysight FlexDCA > Legacy UI**.



86100D Legacy Configuration



86100D Standard Configuration

Figure 7 86100D User Interfaces

- 5 On the PC, start the N1010A FlexDCA application.
- 6 When FlexDCA starts, if the Extended Module Configuration dialog box is displayed, click **Setup**. If the dialog box does not open, click **Setup > DCA Connection Setup**.
- 7 In the FlexDCA Connection Setup dialog box, select Connect Using **LAN** as shown in [Figure 8](#).

2 Installing Both N108xA and N1010A FlexDCA on a PC



**Figure 8** Example of N1010A FlexDCA Connection Setup

- 8 Enter the 86100D's **Hostname** that you recorded in **step 2**.
- 9 Click **Connect** in the dialog box.
- 10 Minimize the N1010A FlexDCA application.



## Step 5. Add ENA Network Analyzer to Keysight Connection Expert

An ENA or PNA network analyzer is required to perform the return-loss measurements.

### NOTE

If you are using a PNA instead of an ENA network analyzer, skip these steps and continue with **“Step 6. Add PNA Network Analyzer to Keysight Connection Expert”** on page 20.

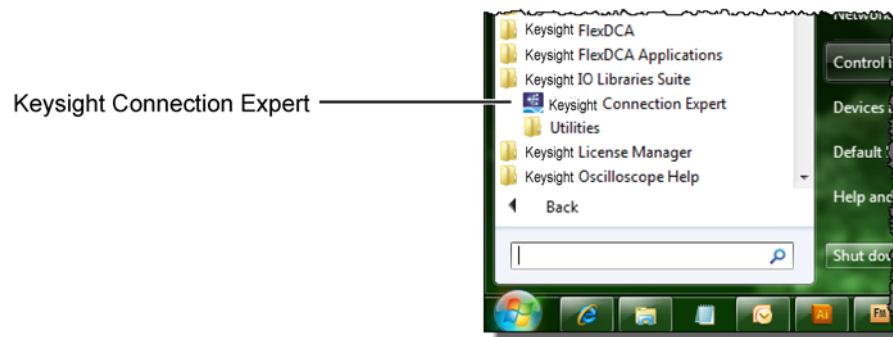
### NOTE

A connection is established to an ENA using the LAN protocol.

- 1 Locate the ENA instrument’s Hostname (Full Computer Name) and record it on the following line. Refer to the network analyzer’s documentation for locating this information.

Hostname: \_\_\_\_\_

- 2 On the PC’s Windows Start menu, click Keysight **IO Libraries Suite** > **Keysight Connection Expert** and wait for the Keysight Connection Expert to open.



**Figure 9** Starting Connection Expert in Windows Start Menu

- 3 In Keysight Connection Expert, click the **LAN I/O** interface identified in **Figure 10**. Then, click **Add Instrument**.

## 2 Installing Both N108xA and N1010A FlexDCA on a PC

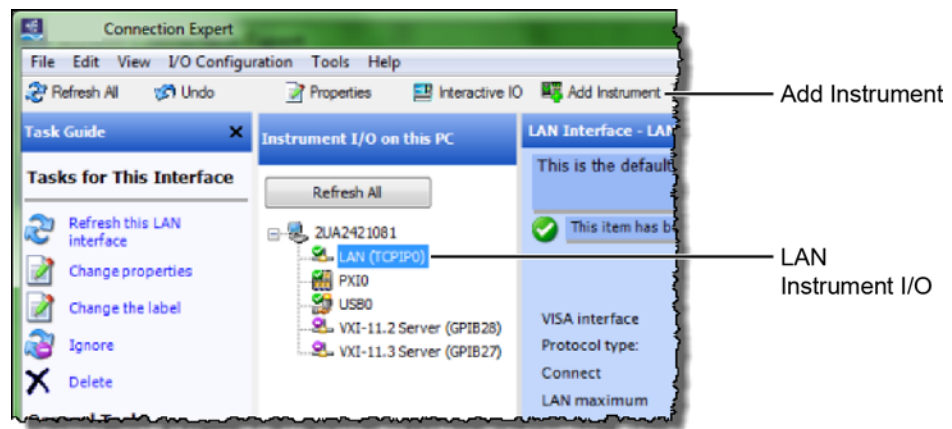
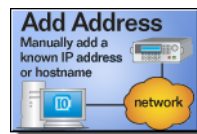
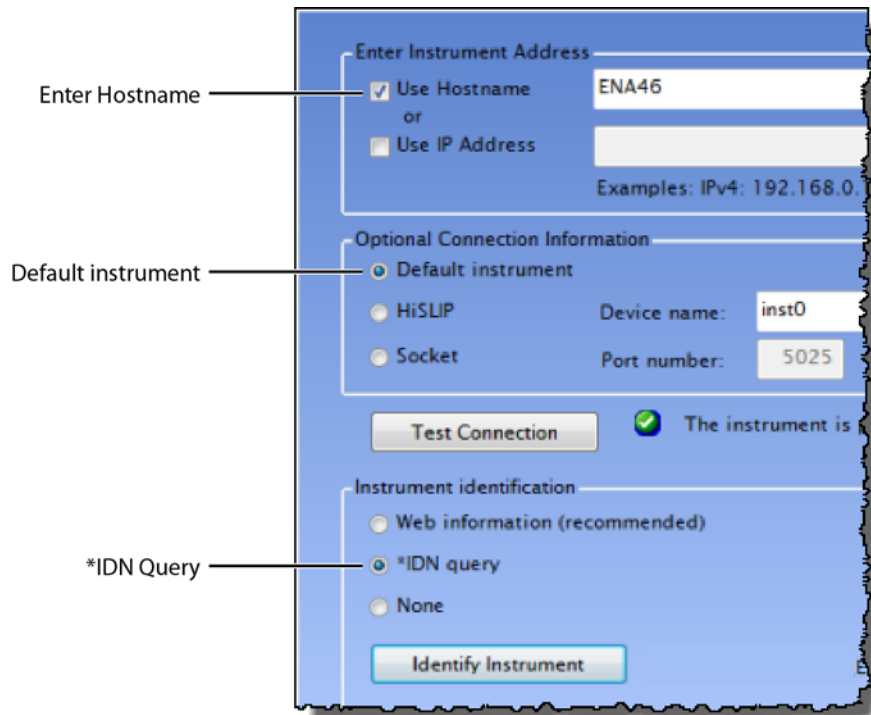


Figure 10 Adding FlexDCA

- 4 In the **Add LAN Instruments** dialog box, click the **Add Address** button to add the network analyzer.



- 5 In the **Enter Instrument Address** field, enter the **Hostname** of the network analyzer that you recorded above. **Figure 11** on page 19 shows an example of this dialog box with the proper settings.
- 6 In the **Optional Connection Information** field, select **Default instrument**.
- 7 In the **Instrument identification** field, select **\*IDN** query.
- 8 To confirm your settings, click the **Test Connection** and **Identify Instrument** buttons.
- 9 Click **OK** to close the dialog box.



**Figure 11** Connection Settings for ENA Network Analyzer (*Your Hostname entry will be different!*)

- 10 Continue with **“Step 7. Add N4877A to Keysight Connection Expert”** on page 22.

## Step 6. Add PNA Network Analyzer to Keysight Connection Expert

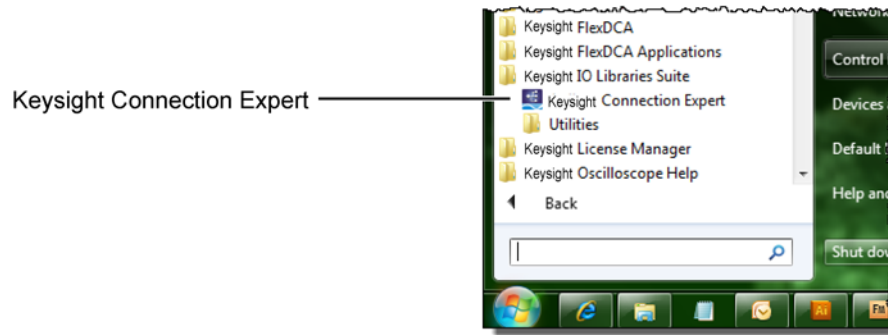
**NOTE**

A connection is established to a PNA using the sockets protocol.

- 1 If you already connected an ENA network analyzer, skip these steps and continue with **“Step 7. Add N4877A to Keysight Connection Expert”** on page 22.
- 2 Locate the PNA instrument’s IP address and record it on the following line. Refer to the network analyzer’s documentation for locating this information.

IP Address: \_\_\_\_\_

- 3 On the PC’s Windows Start menu, click Keysight **IO Libraries Suite** > **Keysight Connection Expert** and wait for the Keysight Connection Expert to open.



- 4 In Keysight Connection Expert, click the **LAN** I/O interface identified in **Figure 12**. Then, click **Add Instrument**.

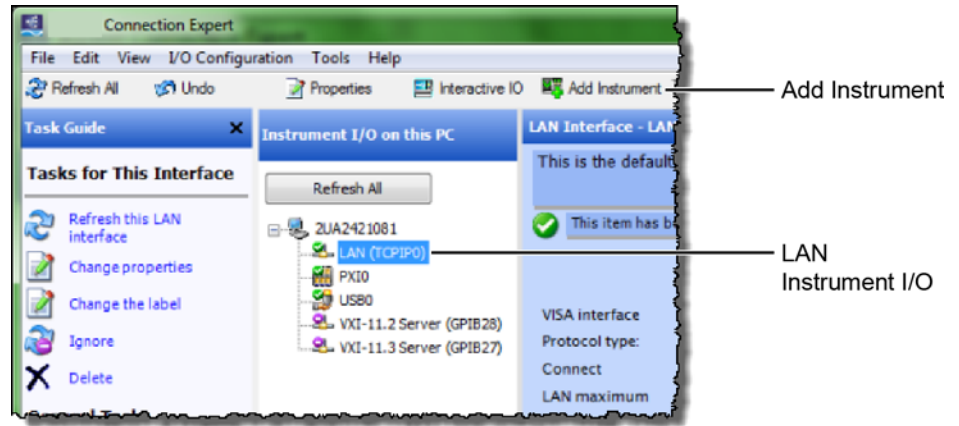


Figure 12 Adding FlexDCA

- 5 In the **Add LAN Instruments** dialog box, click the **Add Address** button to add the network analyzer.



- 6 In the **Enter Instrument Address** field, enter the **IP address** of the network analyzer that you recorded above. **Figure 13** on page 21 shows an example of this dialog box with the proper settings.
- 7 In the **Optional Connection Information** field, select **Socket**.
- 8 In the **Instrument identification** field, select **\*IDN query**.
- 9 To confirm your settings, click the **Test Connection** and **Identify Instrument** buttons.
- 10 Click **OK** to close the dialog box.

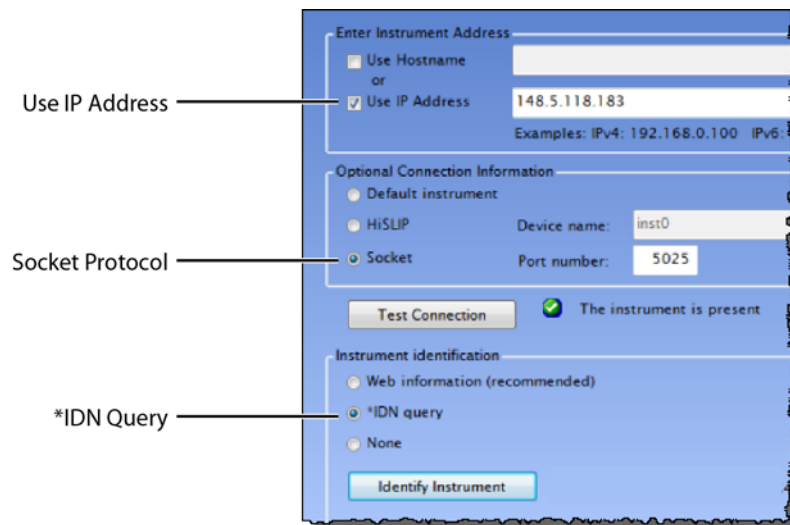
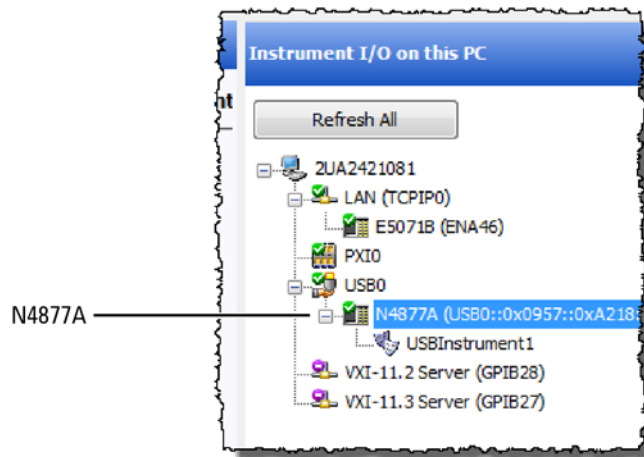


Figure 13 Connection Settings for PNA Network Analyzer (Your IP Address entry will be different!)

## Step 7. Add N4877A to Keysight Connection Expert

The N4877A is required in dual-module test setups. If you are using an 86108A/B module, skip this step.

If the N4877A is connected in your test setup via USB, Keysight Connection Expert should automatically detect the connection. If the N4877A is connected using the LAN, add it to Keysight Connection Expert.



**Figure 14** Example N4877A USB Connection Shown in Keysight Connection Expert

## Step 8 (Optional). Add Switching Test Set to Keysight Connection Expert

The compliance application supports Keysight's U3020A S26 switching test set and the BitifEye BIT 2100. The following steps illustrate connecting to an Keysight U3020A S26.

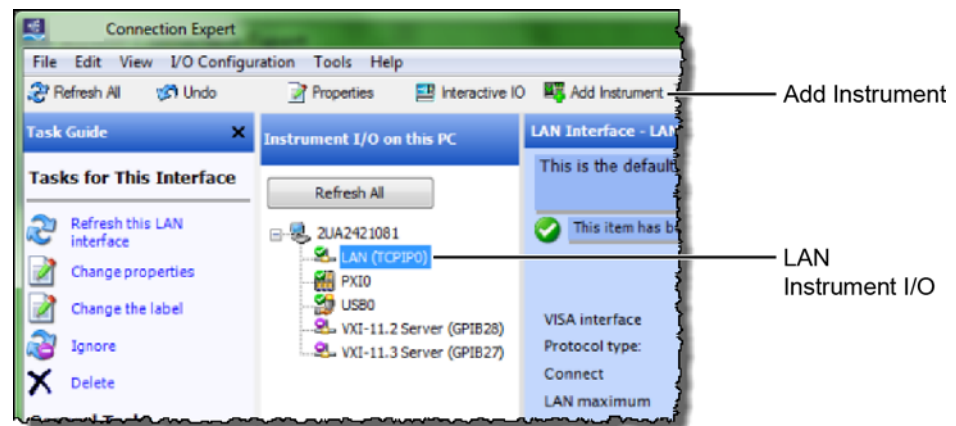
### NOTE

To use a switching test set (switch matrix), you must first install one of the N1081A-7FP, N1082A-7FP, N1083A-7FP, or N1084A-7FP application licenses.

- 1 Locate the switching test set's IP address and record it on the following line. Refer to the instrument's documentation for locating this information.

IP Address: \_\_\_\_\_

- 2 Open the Keysight Connection Expert.
- 3 In Keysight Connection Expert, right click on the **LAN** I/O interface identified in [Figure 15](#). Then, click **Add Instrument**.



**Figure 15** Adding the Switching Test Set

- 4 In the **Add LAN Instruments** dialog box, use the Auto Find feature to locate and select the switching test set. Click **OK** to close the dialog box.



- 5 The connection to the switching test set should now be shown in Keysight Connection Expert as shown in [Figure 16](#).

2 Installing Both N108xA and N1010A FlexDCA on a PC

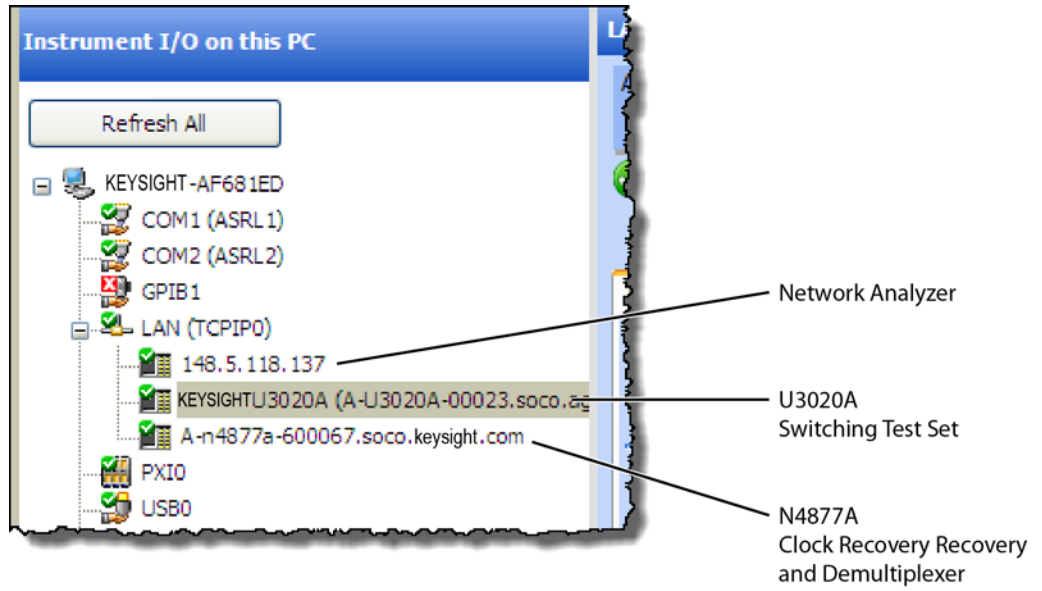
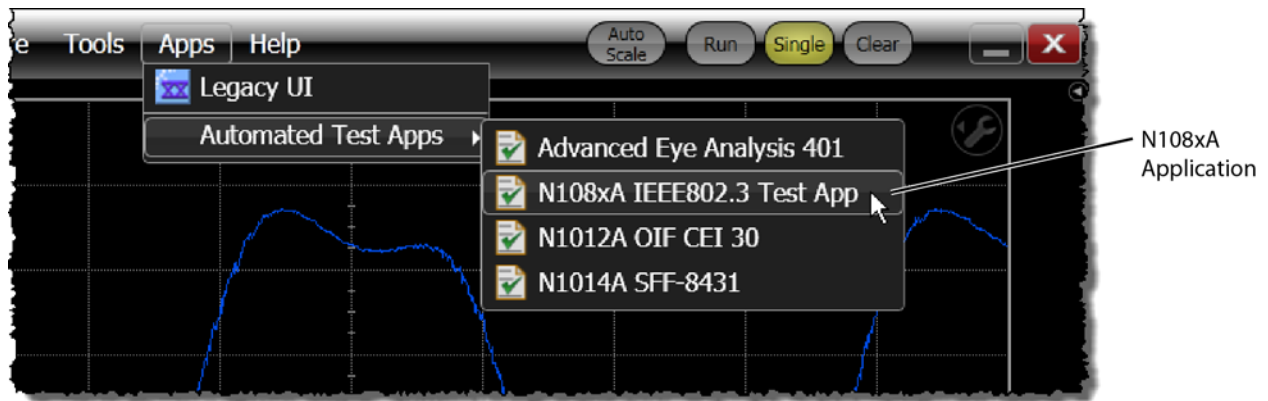


Figure 16 Connection Established for Switching Test Set, Network Analyzer, and Optional N4877A



## Step 9. Start the Compliance Application

- 1 Minimize the Keysight Connection Expert if it is open.
- 2 On N1010A FlexDCA, click **Apps** > **Automated Test Apps** > **N108xA IEEE802.3 Test App**.



**Figure 17** Starting the Compliance Application From the 86100D Menu

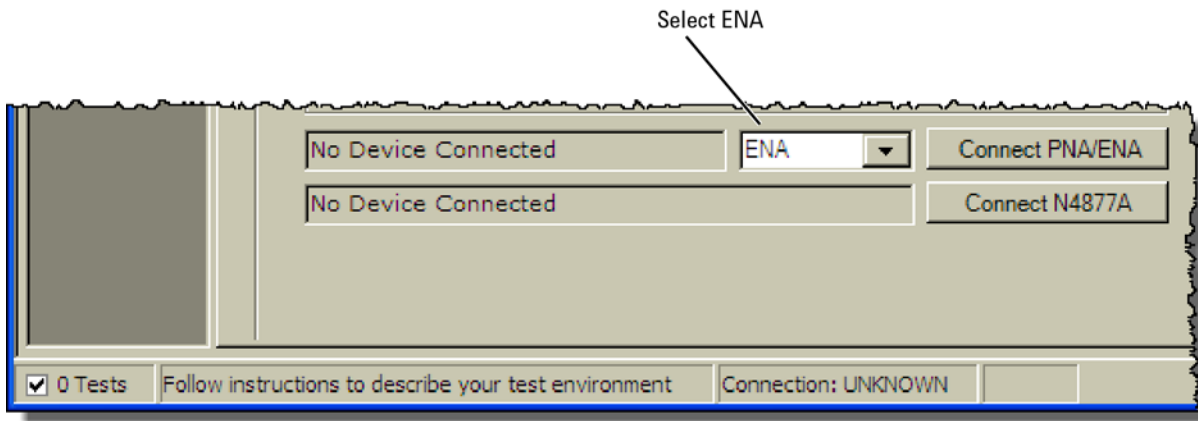
- 3 If a dialog box appears, click **OK** to close it.

## Step 10. Connect to the ENA Network Analyzer

### NOTE

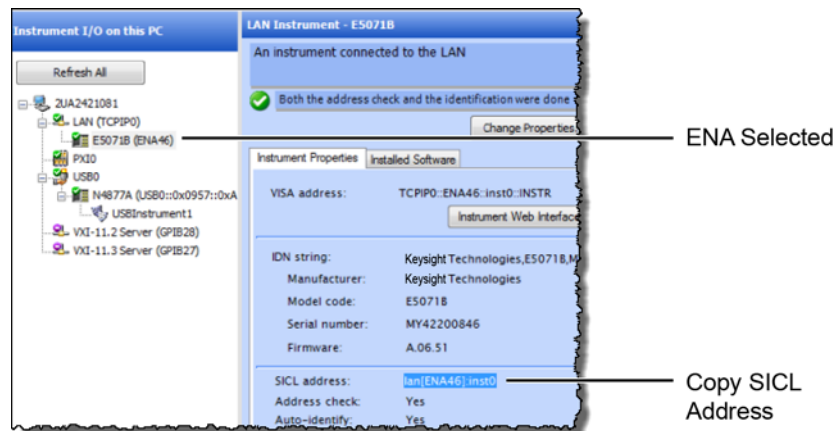
If you are using a PNA instead of an ENA network analyzer, skip these steps and continue with “[Step 11. Connect to the PNA Network Analyzer](#)” on page 28.

- 1 In the compliance application’s **Set Up** tab, select **ENA** for the network analyzer and then click **Connect PNA/ENA**.



**Figure 18** Selecting an ENA Network Analyzer

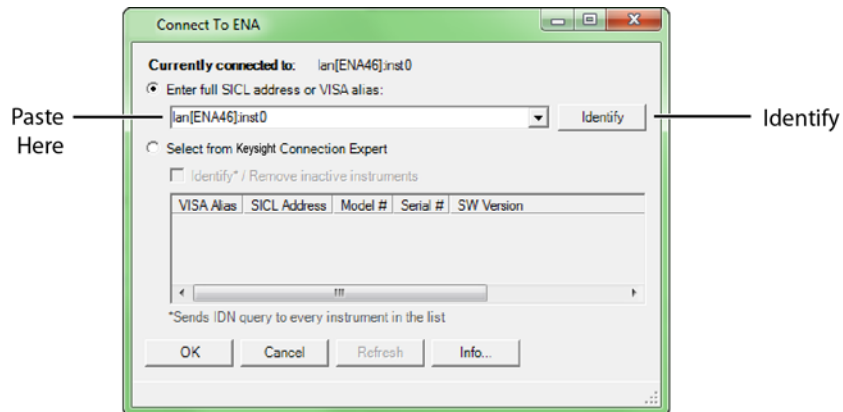
- 2 Go to the Keysight Connection Expert, right click on the ENA listing, and copy the SICL address that is shown in [Figure 19](#).



**Figure 19** Copy ENA’s SICL Address

- 3 Return to the compliance application.

- 4 Select **Enter full SICL address** and paste (**CTRL-V**) the SICL address into the field as shown in **Figure 20**.
- 5 Click **Identify** to confirm the connection.
- 6 Click **OK** to close the dialog box.



**Figure 20** SICL Address Pasted into Dialog Box

- 7 Continue with **"Step 12. Connect to the N4877A"** on page 30.

## Step 11. Connect to the PNA Network Analyzer

### NOTE

If you are using an ENA instead of an PNA network analyzer, skip these steps and continue with “Step 12. Connect to the N4877A” on page 30.

- 1 In the compliance application’s **Set Up** tab, select **PNA** for the network analyzer and then click **Connect PNA/ENA**.

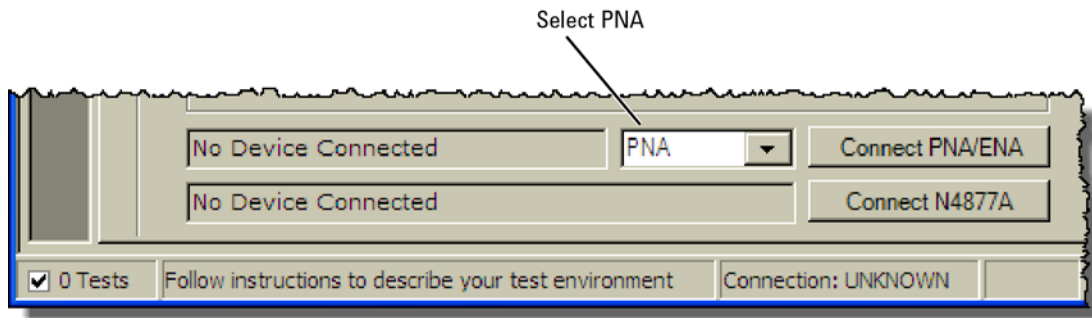


Figure 21 Selecting an PNA Network Analyzer

- 2 Go to the Keysight Connection Expert, right click on the PNA listing, and copy the SICL address that is shown in Figure 19.

### NOTE

Notice that this LAN address for the PNA has the form `lan,5025[/IP address]`.

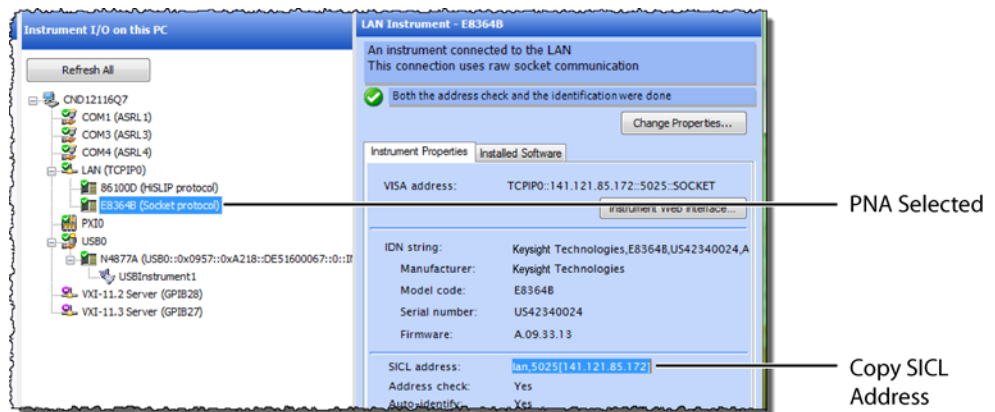
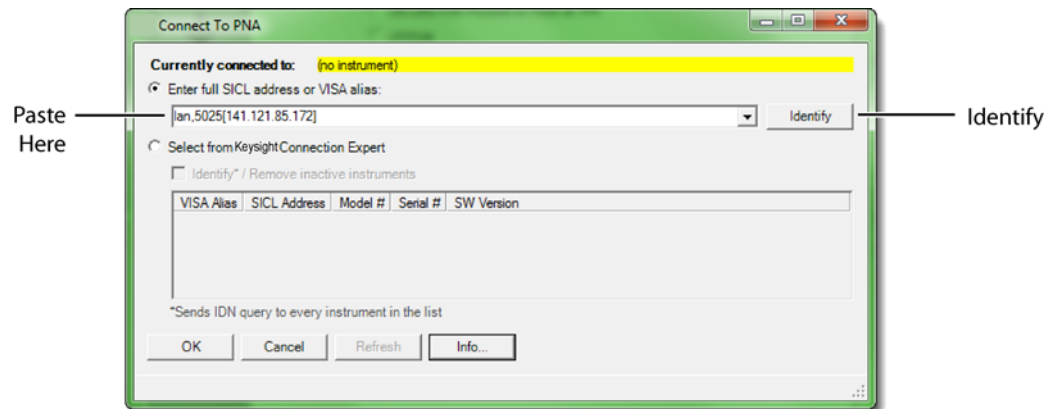


Figure 22 Copy PNA’s SICL Address

- 3 Return to the compliance application:
- 4 Select **Enter full SICL address or VISA alias** and paste (**CTRL-V**) the SICL address into the field as shown in **Figure 23**.
- 5 Click **Identify** to confirm the connection.
- 6 Click **OK** to close the dialog box.



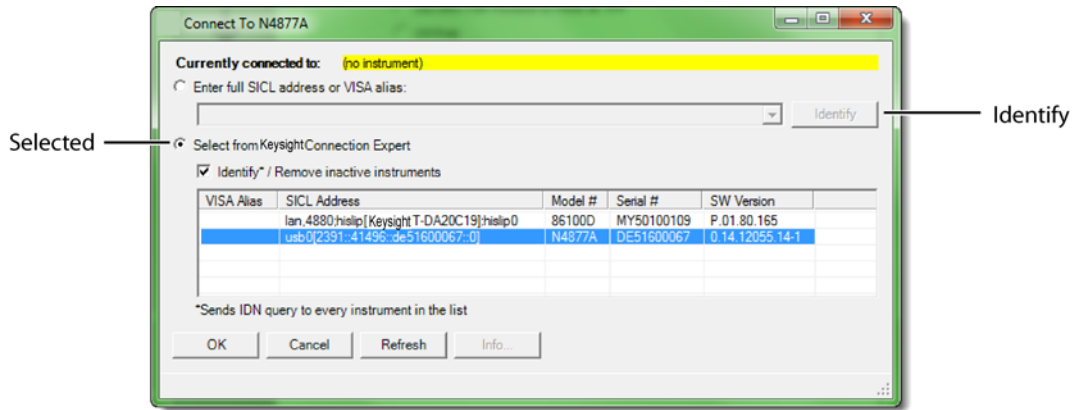
**Figure 23** SICL Address Pasted into Dialog Box

## Step 12. Connect to the N4877A

**NOTE**

Skip this step if your test setup uses an 86108A/B module. The N4877A Clock Data Recovery & Demultiplexer is used whenever two 86100D modules are used in the test setup rather than an 86108A/B module. Refer to [Table 3](#) on page 12.

- 1 In the compliance application's **Set Up** tab, click the **Connect N4877A** button that is located at the bottom of the window.
- 2 Enter the full SICL address or VISA alias. Or, select **Select from Keysight Connection Expert** as shown in [Figure 24](#).
- 3 Click **Identify** to confirm the connection.



**Figure 24** N4877A Selected from Connection Expert

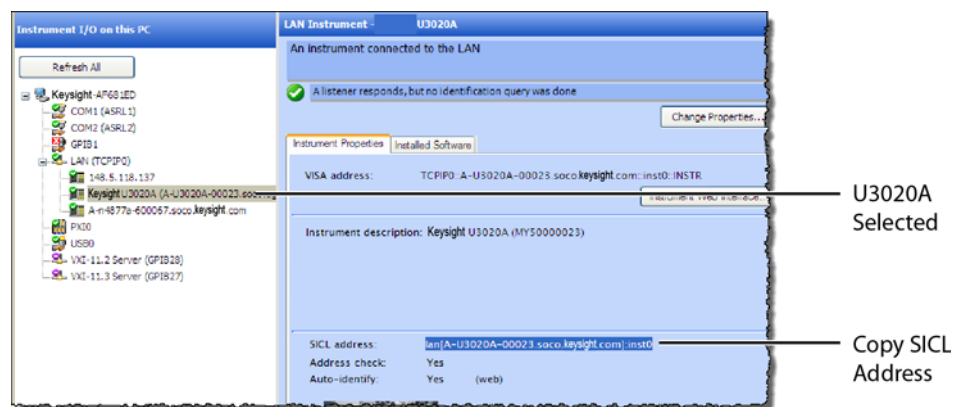
- 4 Click **OK** to close the dialog box.

## Step 13 (Optional). Connect to a Switching Test Set

### NOTE

This section shows how to connect the optional Keysight U3020A S26 Switching Test Set. Connecting a BitfEye BIT 2100 would be similar.

- 1 Go to the Keysight Connection Expert, click on the switching test set listing as shown in [Figure 25](#).
- 2 Right click the SICL address and select copy.



**Figure 25** Copy Switching Test Set's SICL Address

- 3 Return to the compliance application:
- 4 In the compliance application's **Set Up** tab, click the **Switch Matrix Setup** button that is located at the bottom of the window.

### NOTE

This button is *only* displayed if Switch Matrix is selected for the Multi-Lane Test Option field.

- 5 In the **Configure Switch Matrix Settings** dialog box, select **On** which is located at the top of the dialog box as shown in [Figure 26](#) on page 32.
- 6 In the dialog box's **Controller** tab, select **Automatically select drivers and paths (limited models)**.
- 7 In the **Switch Drivers** field, click the **Models** drop-down list to select **Keysight U3020A S26**.
- 8 Click on the blank entry line shown in [Figure 26](#).
- 9 Click **Connect** to open the **Connect to Keysight U3020A S26** dialog box.

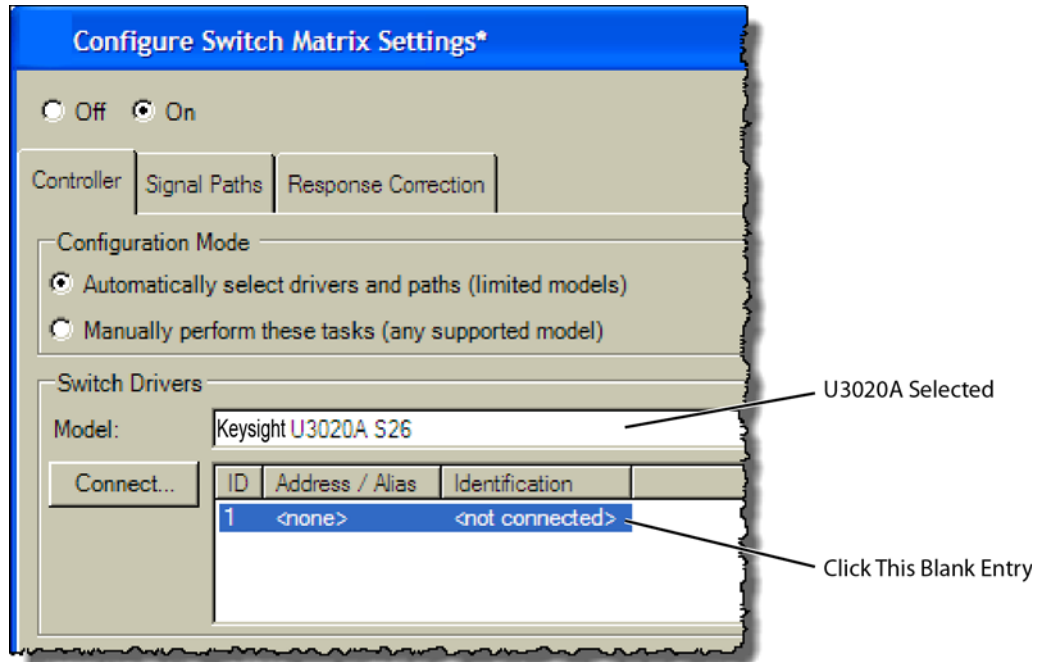


Figure 26 Configure Tab Settings

- 10 In the dialog box, select **Enter full SICL address or VISA alias** and paste (**CTRL-V**) the SICL address into the field as shown in **Figure 27**.
- 11 Click **Identify** to confirm the connection.
- 12 Click **OK** to close the dialog box.

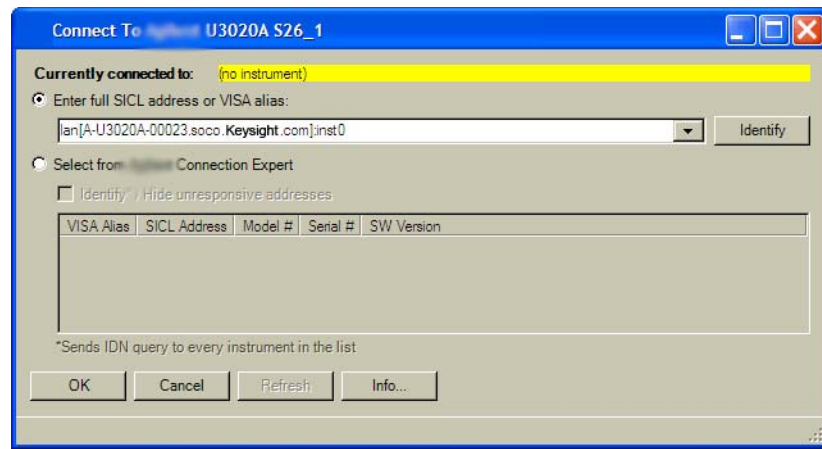


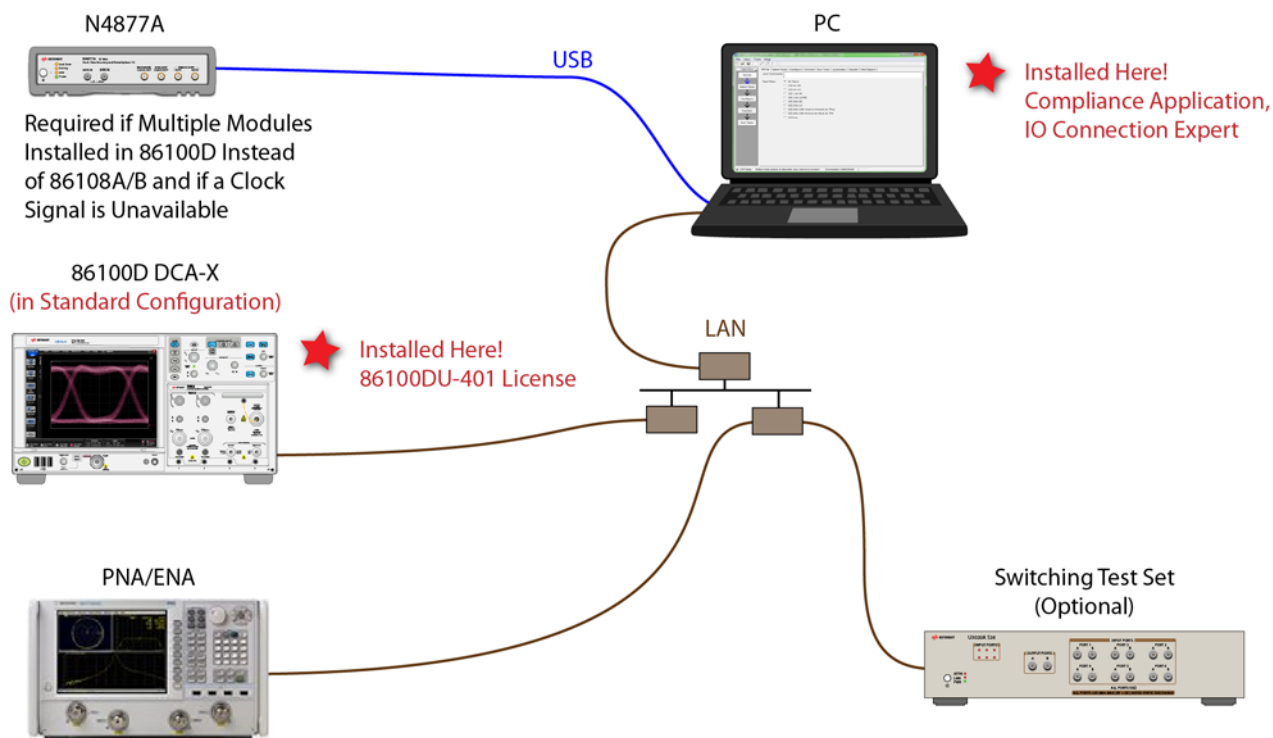
Figure 27 Entering the Switching Test Set's Address

- 13 Refer to the compliance application's Help system to learn how to configure the switch settings.



## 3 Installing N108xA on a PC Without N1010A FlexDCA

Follow the instructions in this chapter when you are installing the compliance application on a PC, but you are *not* installing the N1010A FlexDCA application. Although a version of the 86100DU-401 software is automatically installed with the N1081A-series application, you must purchase and install a license for the 86100DU-401.



**Figure 28** Compliance Application Installed on PC Without N1010A FlexDCA

**NOTE**

If you do not connect a network analyzer, you will not be able to perform the return-loss tests.

## Step 1. Connect the Equipment

- 1 Install one of the module combinations listed in [Table 4](#) into the 86100D.
- 2 Connect the equipment as shown in [Figure 28](#) on page 33 and turn on all of the instruments.

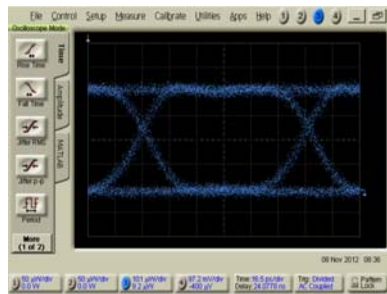
**Table 4** 86100D Module Solutions

Installed Module Configurations	Single Plug-In Module Setup	Multiple Plug-In Module Setup	Description
86108A/B	√		The 86108B can have either options LBW or HBW plus 216 or 232.
N1045A, 86117A, or 86118A-H01 86107A (any option) N4877A-216/232*		√	N4877A-216 provides a maximum data rate of 16 Gb/s. Option 232 provides a maximum data rate of 32 Gb/s.

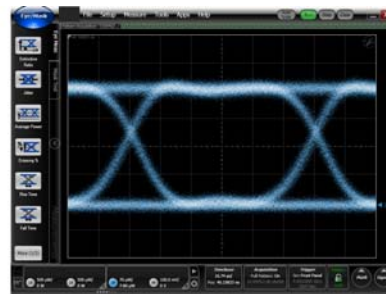
\* If you have access to the clock for the device, you can connect the clock to the 86100D's Trigger input *instead* of using the N4877A.

## Step 2. Place the 86100D in Standard Configuration

- 1 Start the 86100D.
- 2 If the 86100D's Legacy GUI is visible, click **File** > **Exit** to exit the GUI and view the Windows desktop.



86100D Legacy Configuration



86100D Standard Configuration

**Figure 29** 86100D User Interfaces

- 3 On the Windows Start menu, click **All Programs** > Keysight **FlexDCA** > Keysight **FlexDCA**.

## Step 3. Install the I/O Library Suite

- 1 In your internet browser, go to [www.keysight.com/find/iosuite](http://www.keysight.com/find/iosuite) and download the Keysight I/O Library Suite.



### NOTE

Keysight's I/O Library Suite is free software that automatically detects instruments connected to your PC and configures the interfaces. It reduces system setup and configuration time. The compliance application requires Keysight I/O Libraries Suite 16.3 or higher.

- 2 Install the I/O Library Suite on the same PC where you will install the compliance application.

## Step 4. Install the Compliance Application

The following steps install the compliance application and its license as well as the license for the 86100DU-401. A version of the 86100DU-401 is automatically installed for use with the compliance application.

- 1 Go to [www.keysight.com](http://www.keysight.com) and search for and download the compliance application. Install the application on the specific PC for which you redeemed the license.

### NOTE

When you redeemed a compliance application license, you selected to install the application either on a specific 86100D or a specific PC.

- 2 Place the license file that you received from Keysight in a folder or accessible memory device.
- 3 If not already done so, purchase an 86100DU-401 license. Place the license file that you received from Keysight in a folder or accessible memory device.
- 4 On the PC's Windows start menu, locate the Keysight License Manager and start it.

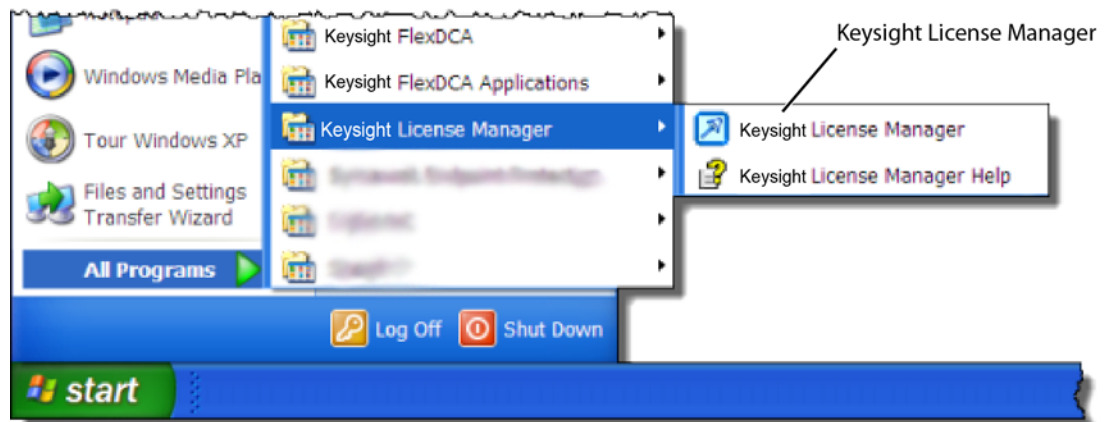
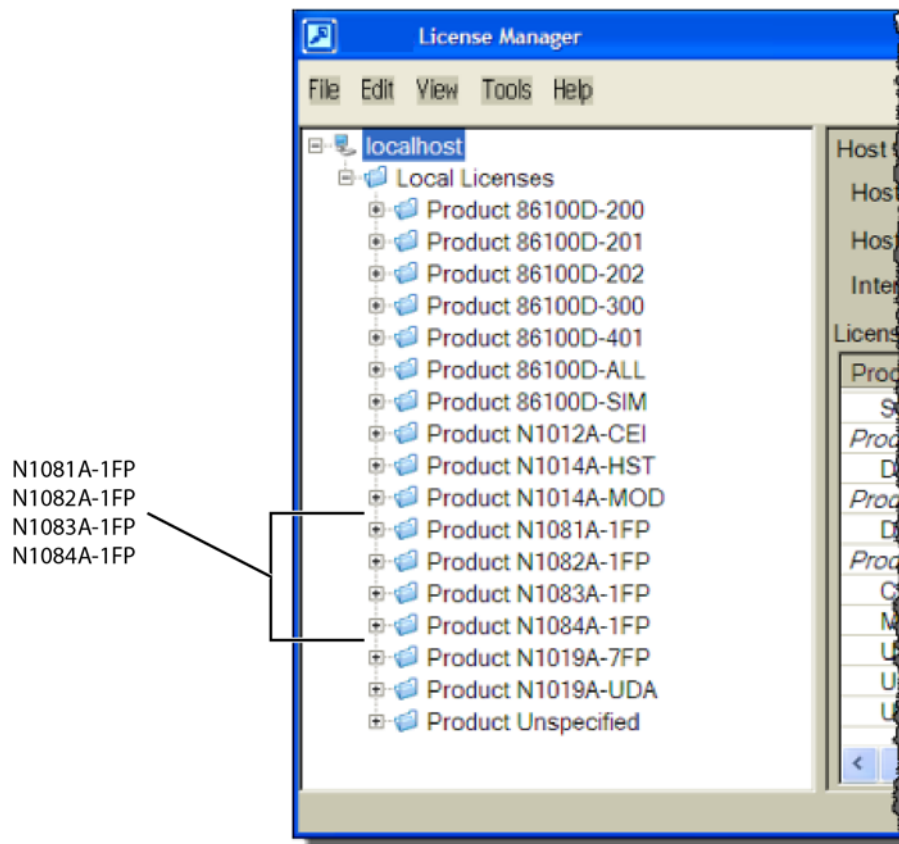


Figure 30 License Manager in Windows Start Menu

- 5 In the Keysight License Manager, select and right click the compliance application listing and click **Install**. If the compliance application is not listed, click **File > Install**.
- 6 In the **Install License File(s)** dialog box, locate your license file and click **Open**. You may have up four licenses: N1081A, N1082A, N1083A, and N1084A as shown in **Figure 31** on page 36.

**NOTE**

If you are using one of the switching test sets (switch matrix), you will also need one of the N1081A-7FP, N1082A-7FP, N1083A-7FP, or N1084A-7FP licenses.



**Figure 31** Compliance Application Licenses in Keysight License Manager

**NOTE**

If you plan to run all of the application's IEEE 802.3 Ethernet KR/CR tests, you will need install one each of the N1081A, N1082A, N1083A, and N1084A licenses.

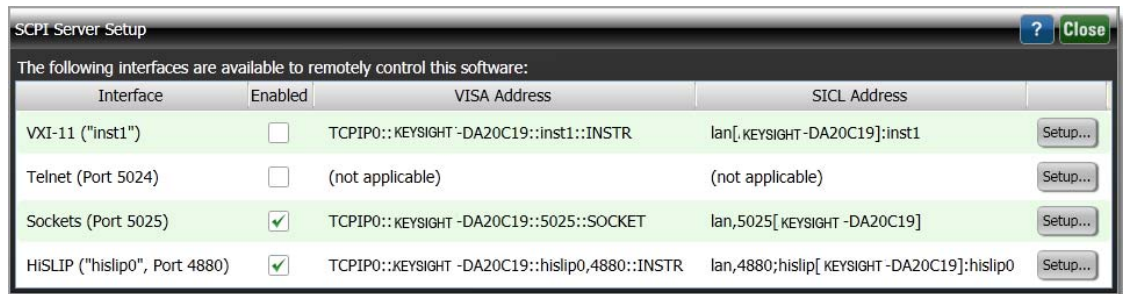
- 7 Select and install the 86100DU-401 license on the 86100D.
- 8 Close the Keysight License Manager.

## Step 5. Configure 86100D's SCPI Server Setup

- 1 On the 86100D, click **Help > About** and locate the System Information field in the dialog box. Scroll the field to view the **Computer Name** entry. You can also obtain the computer name from the Windows System properties.
- 2 Record the Computer Name (host name) as you will need this name later in this procedure.

86100D Computer Name: \_\_\_\_\_

- 3 Close the dialog box.
- 4 Click **Tools > SCPI Programming Tools > SCPI Server Setup**.
- 5 In the dialog box, confirm that the **Sockets** and **HiSLIP** interfaces are selected (Enabled) as shown in [Figure 32](#).
- 6 Close the dialog box.



**Figure 32** 86100D's SCPI Server Setup Dialog Box

## Step 6. Add 86100D to Keysight Connection Expert

- 1 On the PC's Windows Start menu, click Keysight **IO Libraries Suite** > Keysight **Connection Expert** and wait for the Keysight Connection Expert to open.

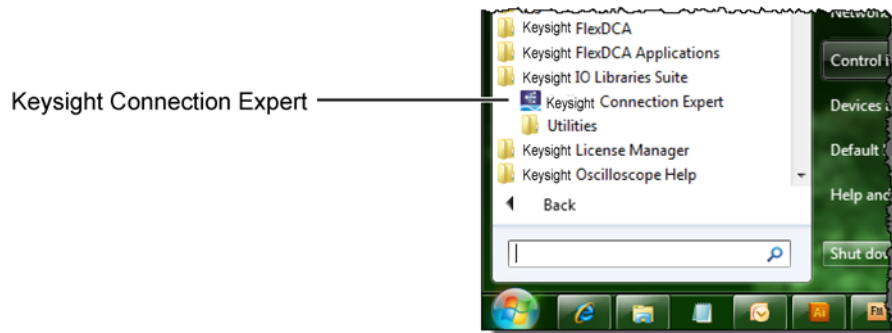


Figure 33 Starting Connection Expert in Windows Start Menu

- 2 In Keysight Connection Expert, click the **LAN** interface identified in Figure 34. Then, click **Add Instrument** on the toolbar.

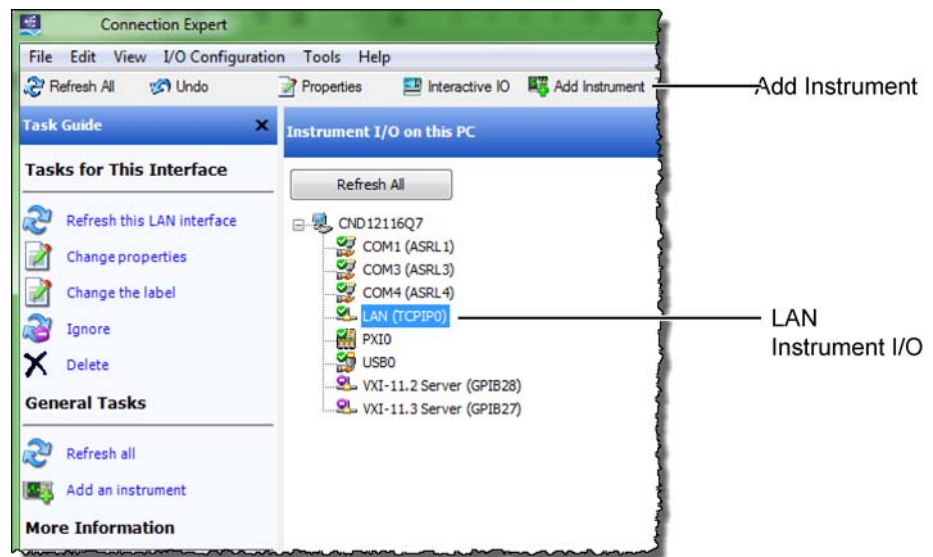
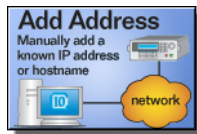
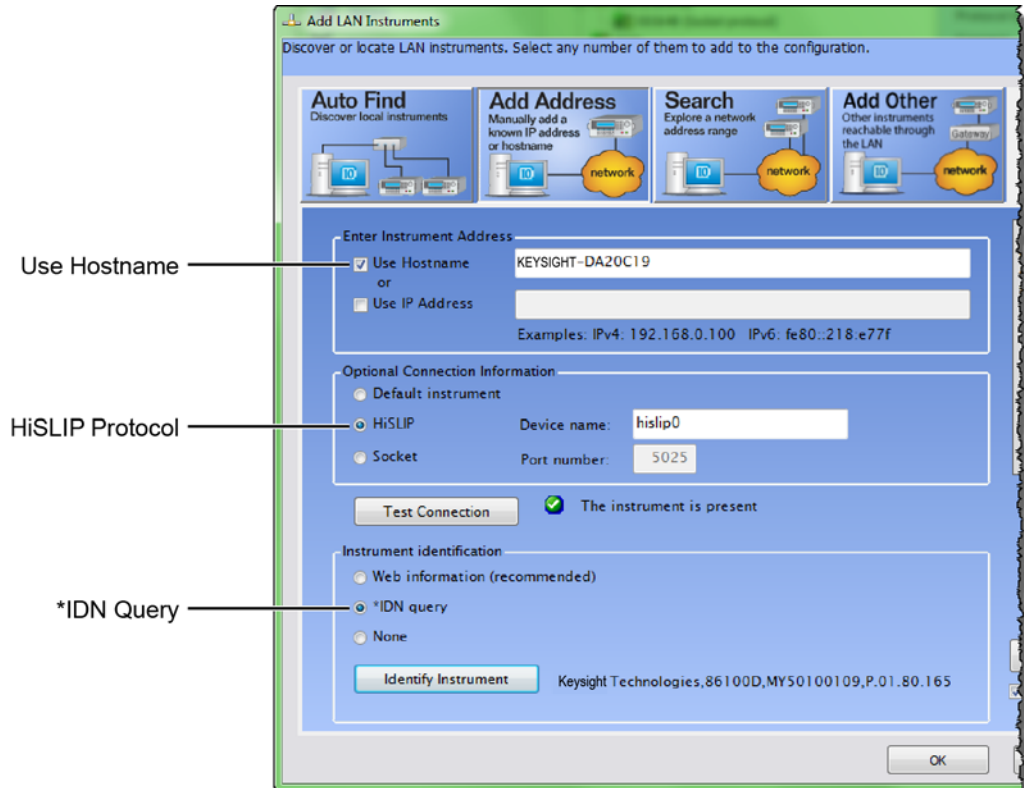


Figure 34 Adding FlexDCA

- 3 In the **Add LAN Instruments** dialog box, click the **Add Address** button to add the 86100D.



- 4 In the Enter Instrument Address field, select **Use Hostname** and enter the 86100D's computer name that you recorded in **step 2** on page 37. **Figure 35** shows an example of this dialog box with the settings configured.
- 5 In the **Optional Connection Information** field, select **HiSLIP**. The **Device Name** should be listed as **hislip0**. FlexDCA uses the HiSLIP protocol.
- 6 In the **Instrument identification** field, select **\*IDN** query.
- 7 To confirm your settings, click the **Test Connection** and **Identify Instrument** buttons.
- 8 Click **OK** to close the dialog box.



**Figure 35** Add LAN Instrument Settings (*Your Hostname entry will be different!*)

- 9 The **86100D (HSLIP protocol)** connection is now listed as shown in **Figure 36** on page 40.

3 Installing N108xA on a PC Without N1010A FlexDCA

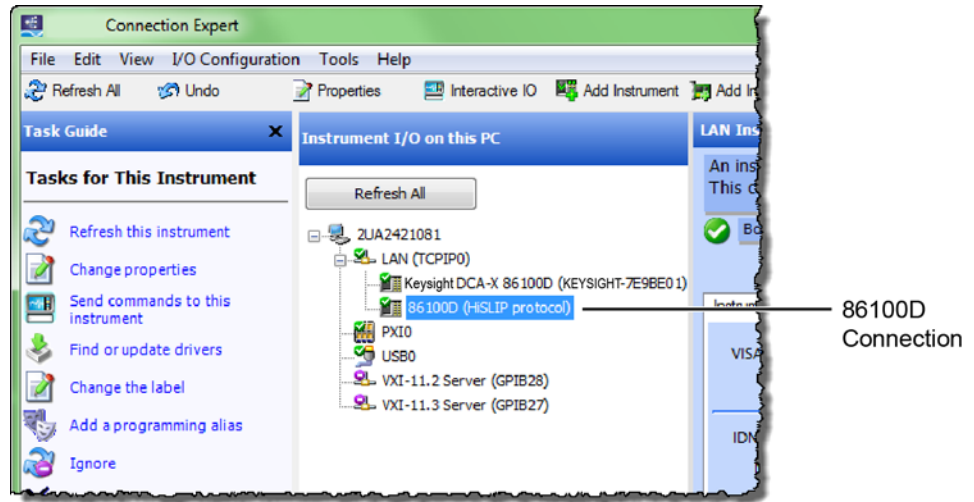


Figure 36 86100D (HSLIP protocol) Connection



## Step 7. Add ENA Network Analyzer to Keysight Connection Expert

An ENA or PNA network analyzer is required to perform the return-loss measurements.

### NOTE

If you are using a PNA instead of an ENA network analyzer, skip these steps and continue with “[Step 8. Add PNA Network Analyzer to Keysight Connection Expert](#)” on page 43.

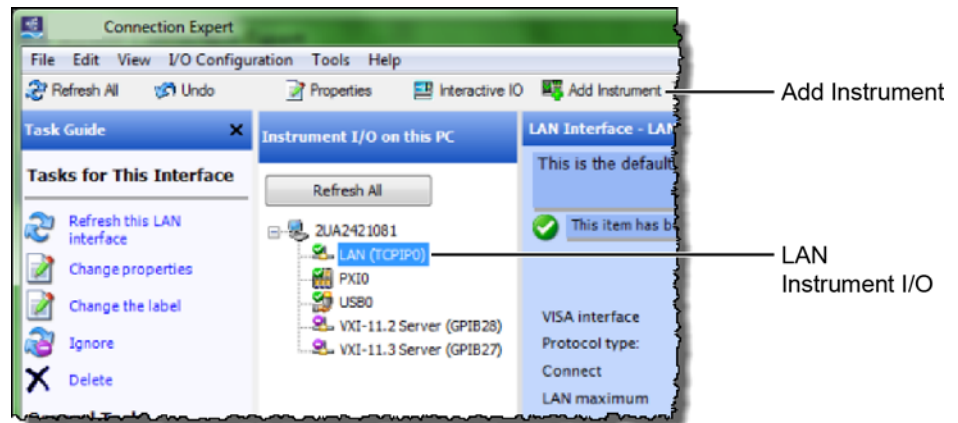
### NOTE

A connection is established to an ENA using the LAN protocol.

- 1 Locate the ENA instrument’s Hostname (Full Computer Name) and record it on the following line. Refer to the network analyzer’s documentation for locating this information.

Hostname: \_\_\_\_\_

- 2 On the PC, view the Keysight Connection Expert, and click the **LAN** I/O interface identified in [Figure 37](#). Then, click **Add Instrument**.



**Figure 37** Adding the ENA

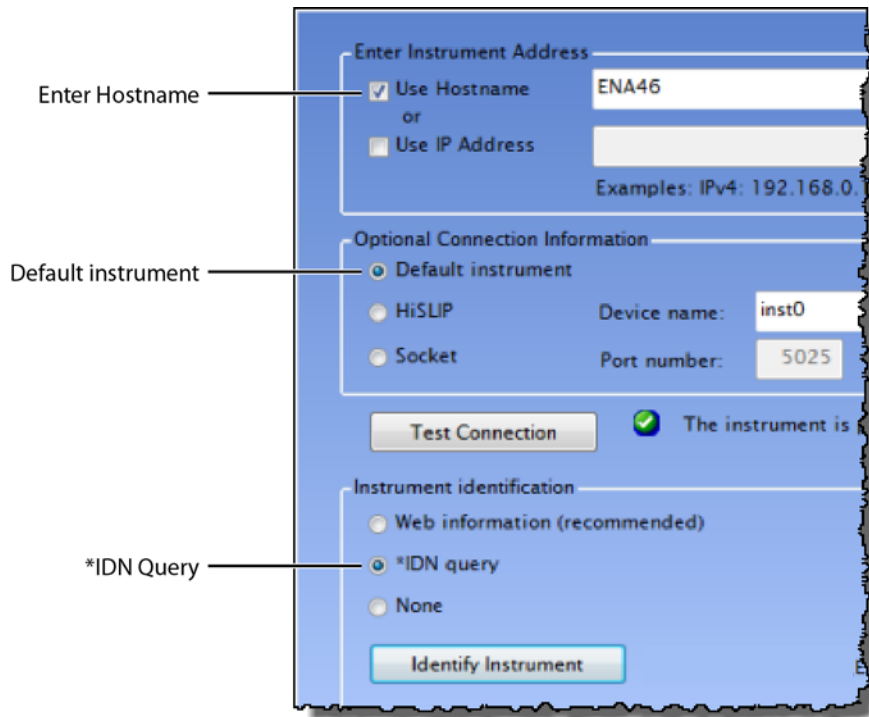
- 3 In the **Add LAN Instruments** dialog box, click the **Add Address** button to add the network analyzer.



- 4 In the **Enter Instrument Address** field, enter the **Hostname** of the network analyzer that you recorded above. [Figure 38](#) on page 42 shows an example of this dialog box with the proper settings.
- 5 In the **Optional Connection Information** field, select **Default instrument**.

3 Installing N108xA on a PC Without N1010A FlexDCA

- 6 In the **Instrument identification** field, select **\*IDN** query.
- 7 To confirm your settings, click the **Test Connection** and **Identify Instrument** buttons.
- 8 Click **OK** to close the dialog box.



**Figure 38** Connection Settings for ENA Network Analyzer (*Your Hostname entry will be different!*)

- 9 Continue with "**Step 9. Add N4877A to Keysight Connection Expert**" on page 45.

## Step 8. Add PNA Network Analyzer to Keysight Connection Expert

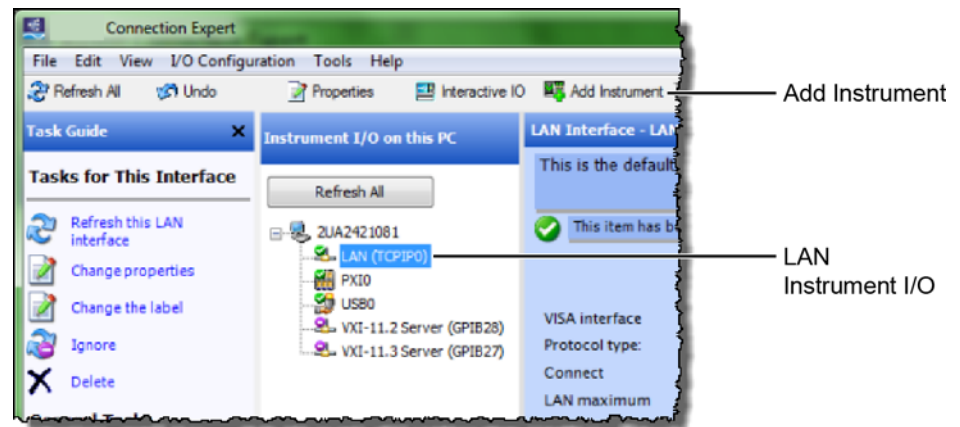
### NOTE

A connection is established to a PNA using the sockets protocol.

- 1 If you already connected an ENA network analyzer, skip these steps and continue with **“Step 9. Add N4877A to Keysight Connection Expert”** on page 45.
- 2 Locate the PNA instrument’s IP address and record it on the following line. Refer to the network analyzer’s documentation for locating this information.

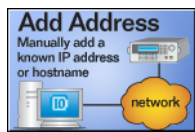
IP Address:

- 3 On the PC, view the Keysight Connection Expert, and click the **LAN I/O** interface identified in **Figure 39**. Then, click **Add Instrument**.



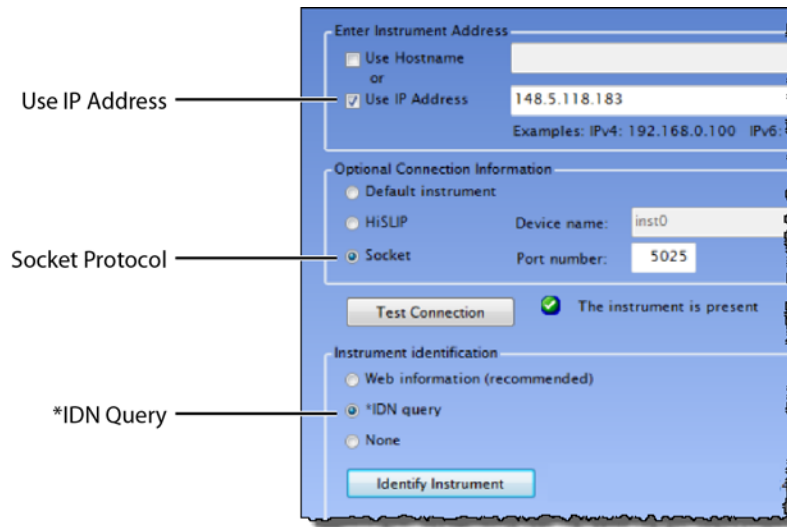
**Figure 39** Adding the PNA

- 4 In the **Add LAN Instruments** dialog box, click the **Add Address** button to add the network analyzer.



- 5 In the **Enter Instrument Address** field, enter the **IP address** of the network analyzer that you recorded above. **Figure 40** on page 44 shows an example of this dialog box with the proper settings.
- 6 In the **Optional Connection Information** field, select **Socket**.
- 7 In the **Instrument identification** field, select **\*IDN** query.
- 8 To confirm your settings, click the **Test Connection** and **Identify Instrument** buttons.
- 9 Click **OK** to close the dialog box.

### 3 Installing N108xA on a PC Without N1010A FlexDCA

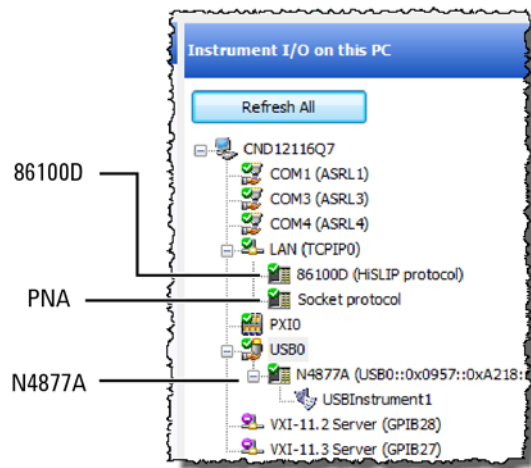


**Figure 40** Connection Settings for PNA Network Analyzer (*Your IP Address entry will be different!*)

## Step 9. Add N4877A to Keysight Connection Expert

The N4877A is required in dual-module test setups. If you are using an 86108A/B module, skip this step.

If the N4877A is connected in your test setup via USB, Keysight Connection Expert should automatically detect the connection. If the N4877A is connected using the LAN, add it to Keysight Connection Expert.



**Figure 41** Example Connections Shown in Keysight Connection Expert

## Step 10 (Optional). Add Switching Test Set to Keysight Connection Expert

The compliance application supports Keysight’s U3020A S26 switching test set and the BitifEye BIT 2100. The following steps illustrate connecting to an Keysight U3020A S26.

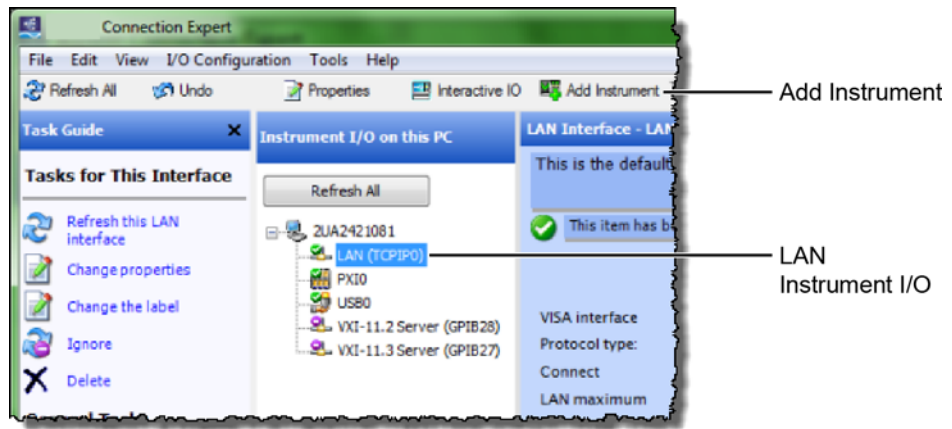
**NOTE**

To use a switching test set (switch matrix), you must first install one of the N1081A-7FP, N1082A-7FP, N1083A-7FP, or N1084A-7FP application licenses.

- 1 Locate the switching test set’s IP address and record it on the following line. Refer to the instrument’s documentation for locating this information.

IP Address: \_\_\_\_\_

- 2 Open the Keysight Connection Expert.
- 3 In Keysight Connection Expert, right click on the **LAN** I/O interface identified in **Figure 42**. Then, click **Add Instrument**.



**Figure 42** Adding FlexDCA

- 4 In the **Add LAN Instruments** dialog box, use the Auto Find feature to locate and select the switching test set. Click **OK** to close the dialog box.



- 5 The connection to the switching test set should now be shown in Keysight Connection Expert as shown in **Figure 43**.

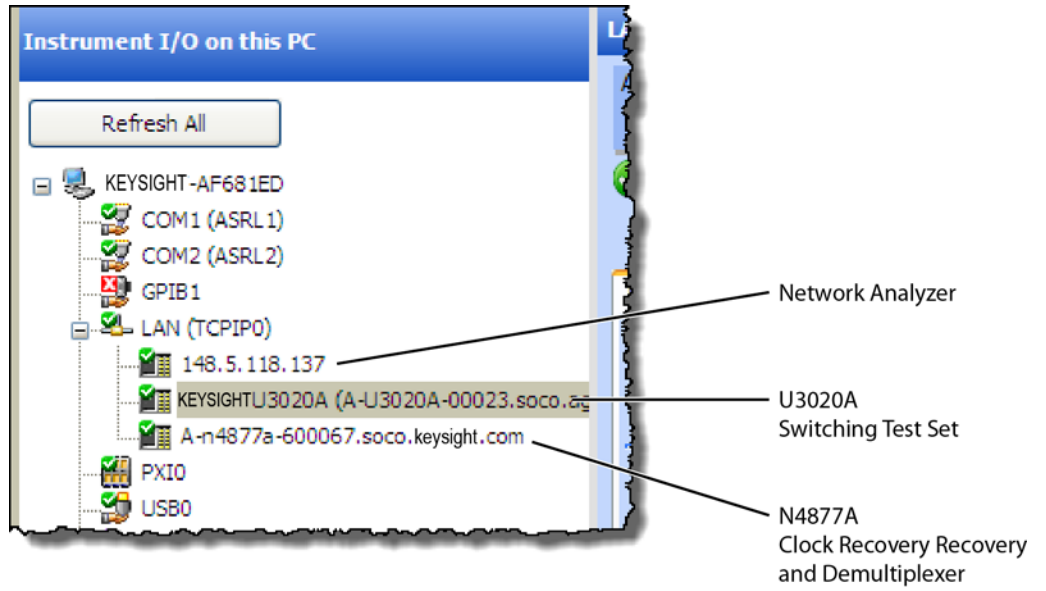
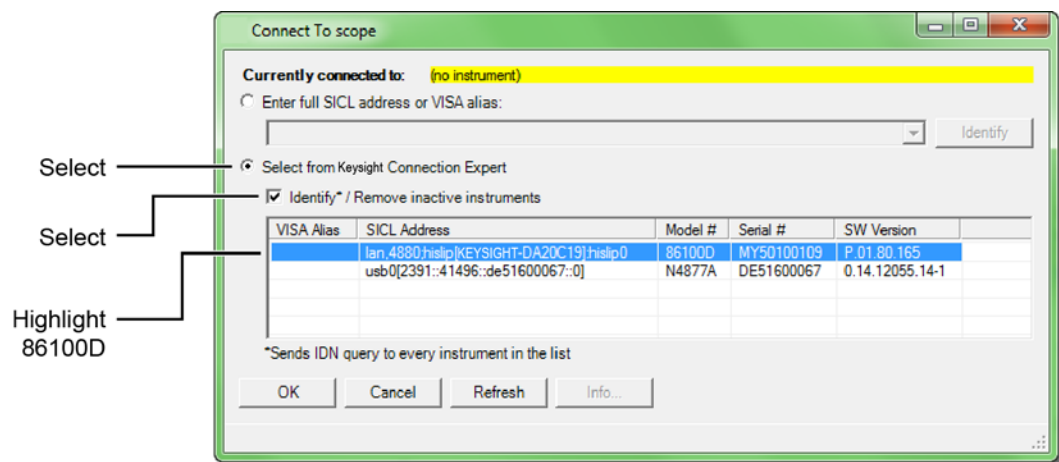


Figure 43 Connection Established for Switching Test Set, Network Analyzer, and Optional N4877A

## Step 11. Start the Compliance Application

- 1 Minimize the Keysight Connection Expert if it is open.
- 2 On the PC's start menu, click **Launch User Defined Application 'N108xA IEEE802.3 Test App'**.
- 3 The Connect to Scope dialog box will open as shown in **Figure 44**.
- 4 Select **Select from Keysight Connection Expert** as shown in the figure.
- 5 Select **Identify/Remove inactive instruments**.
- 6 Click the 86100D's listing (with the host name in the SICL Address field) and then click **OK** to close the dialog box.



**Figure 44** Connect to Scope Dialog Box

- 7 If a dialog box appears, click **OK** to close it.

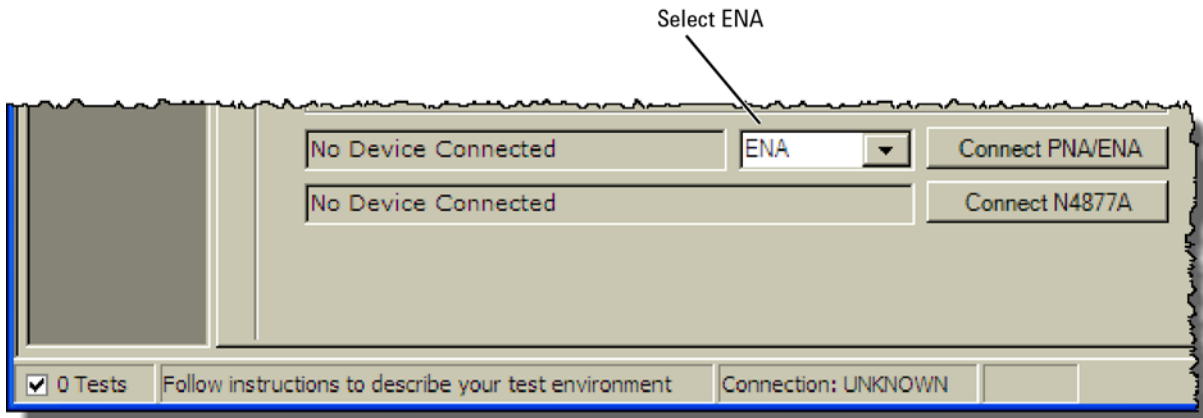


## Step 12. Connect to the ENA Network Analyzer

### NOTE

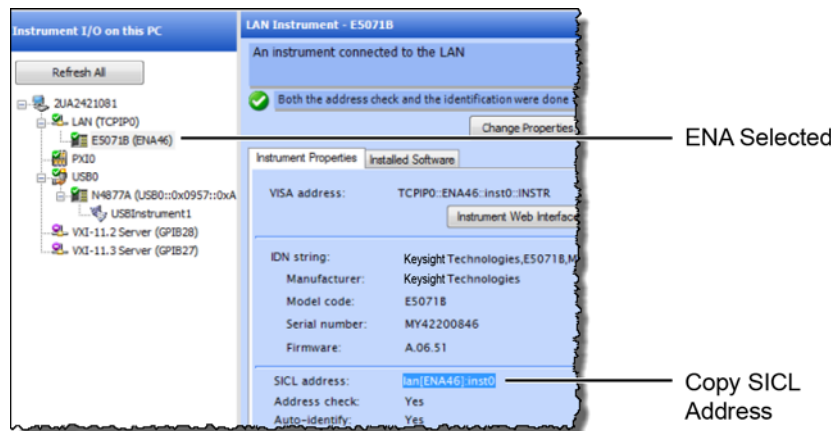
If you are using a PNA instead of an ENA network analyzer, skip these steps and continue with “[Step 13. Connect to the PNA Network Analyzer](#)” on page 51.

- 1 In the compliance application’s **Set Up** tab, select **ENA** for the network analyzer and then click **Connect PNA/ENA**.



**Figure 45** Selecting an ENA Network Analyzer

- 2 Go to the Keysight Connection Expert, click on the ENA listing, and copy (**CTRL-C**) the SICL address that is shown in [Figure 46](#).

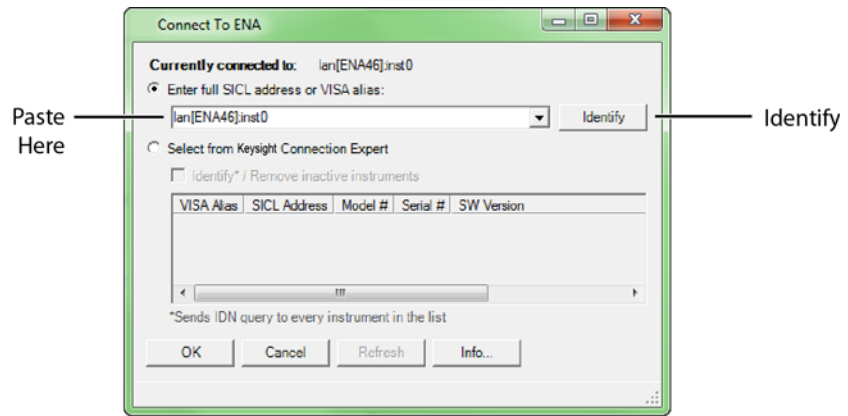


**Figure 46** Copy ENA’s SICL Address

- 3 Return to the compliance application.
- 4 Select **Enter full SICL address** and paste (**CTRL-V**) the SICL address into the field as shown in [Figure 47](#) on page 50.
- 5 Click **Identify** to confirm the connection.

3 Installing N108xA on a PC Without N1010A FlexDCA

- 6 Click **OK** to close the dialog box.



**Figure 47** SICL Address Pasted into Dialog Box

- 7 Continue with **“Step 14. Connect to the N4877A”** on page 52.

## Step 13. Connect to the PNA Network Analyzer

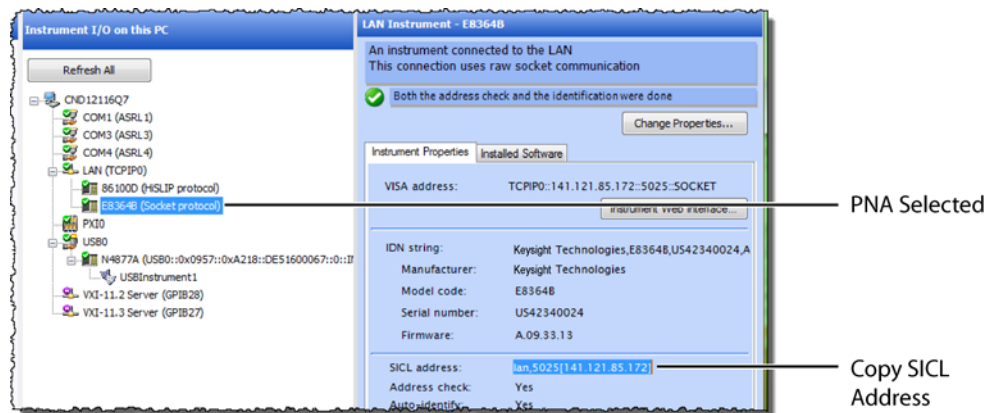
### NOTE

If you already connected an ENA network analyzer, skip these steps and continue with “[Step 14. Connect to the N4877A](#)” on page 52.

- 1 Go to the Keysight Connection Expert, click on the PNA listing, and copy (**CTRL-C**) the SICL address that is shown in [Figure 48](#).

### NOTE

Notice that this LAN address for the PNA has the form `lan,5025[/IP address]`.



**Figure 48** Copy PNA's SICL Address

- 2 Return to the compliance application.
- 3 Select **Enter full SICL address or VISA alias** and paste (**CTRL-V**) the SICL address into the field as shown in [Figure 49](#).
- 4 Click **Identify** to confirm the connection. Click **OK** to close the dialog box.

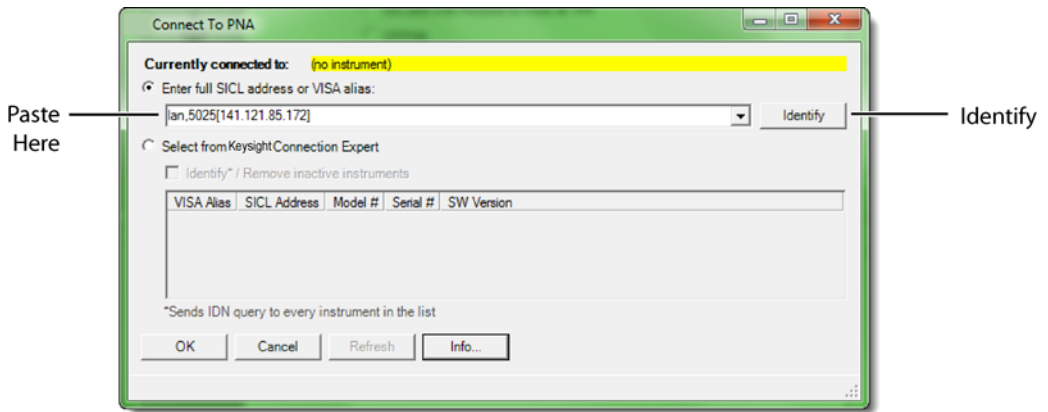


Figure 49 SICL Address Pasted into Dialog Box

## Step 14. Connect to the N4877A

**NOTE**

Skip this step if your test setup uses an 86108A/B module. The N4877A Clock Data Recovery & Demultiplexer is used whenever two 86100D modules are used in the test setup rather than an 86108A/B module. Refer to [Table 4](#) on page 34.

- 1 In the compliance application's **Set Up** tab, click the **Connect N4877A** button that is located at the bottom of the window.
- 2 Enter the full SICL address or VISA alias. Or, select **Select from Keysight Connection Expert** as shown in [Figure 50](#).
- 3 Click **Identify** to confirm the connection.

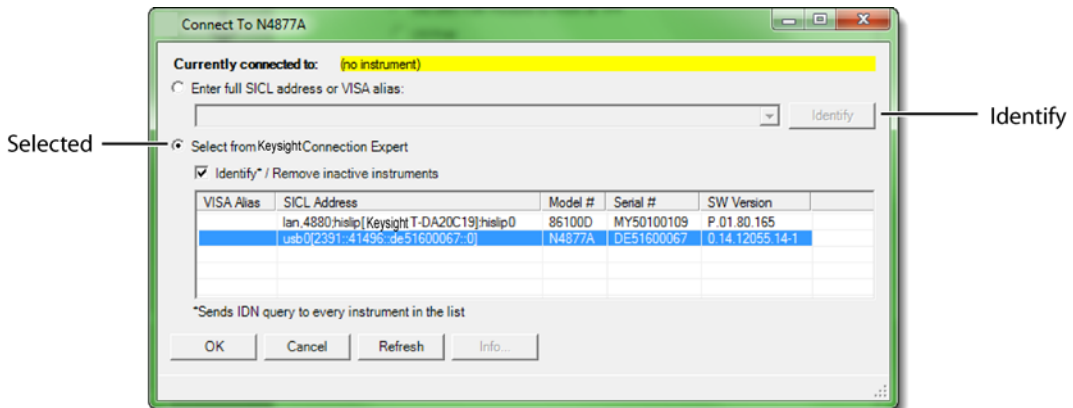


Figure 50 N4877A Selected from Connection Expert

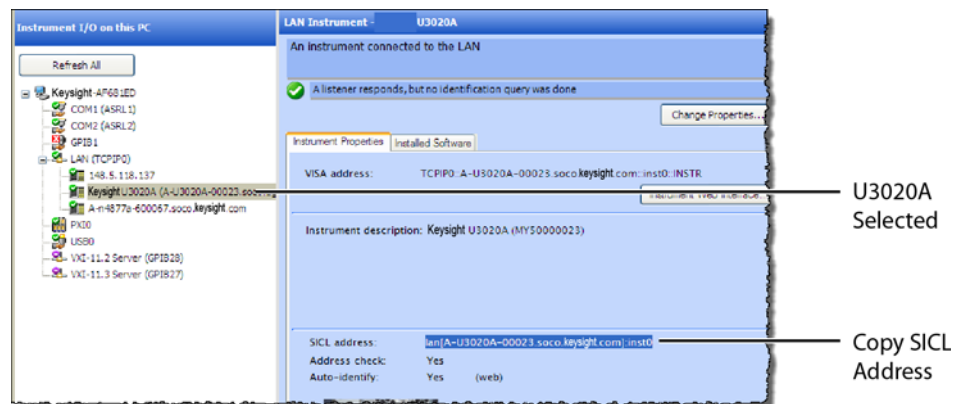
- 4 Click **OK** to close the dialog box.

## Step 15 (Optional). Connect to Switching Test Set

### NOTE

This section shows how to connect the optional Keysight U3020A S26 Switching Test Set. Connecting a BitfEye BIT 2100 would be similar.

- 1 Go to the Keysight Connection Expert, click on the switching test set listing as shown in [Figure 51](#).
- 2 Right click the SICL address and select copy.



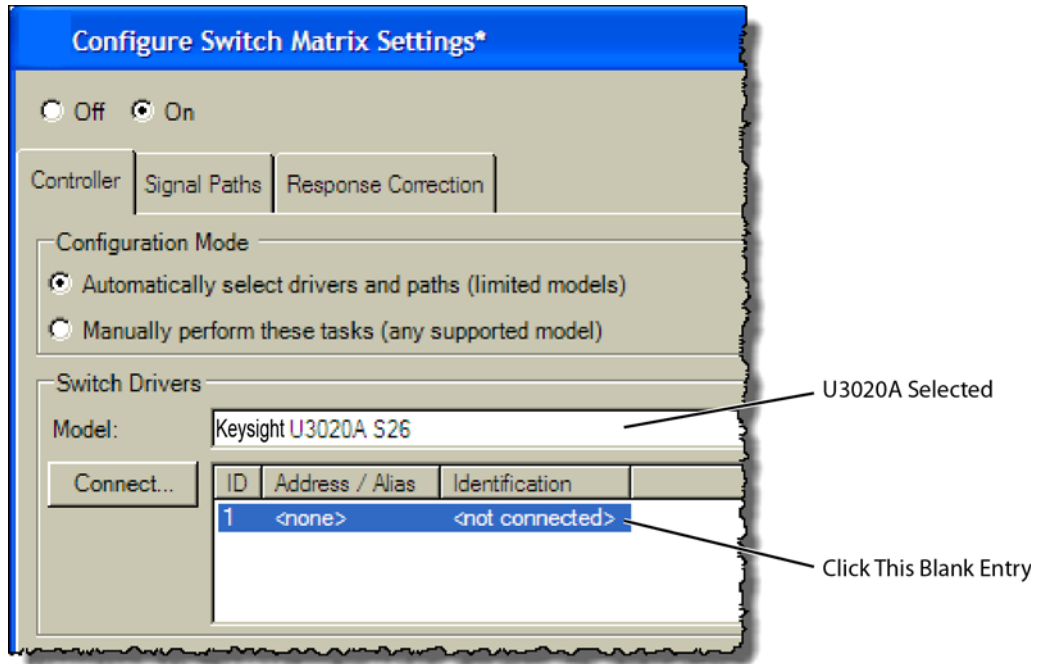
**Figure 51** Copy Switching Test Set's SICL Address

- 3 Return to the compliance application:
- 4 In the compliance application's **Set Up** tab, click the **Switch Matrix Setup** button that is located at the bottom of the window.

### NOTE

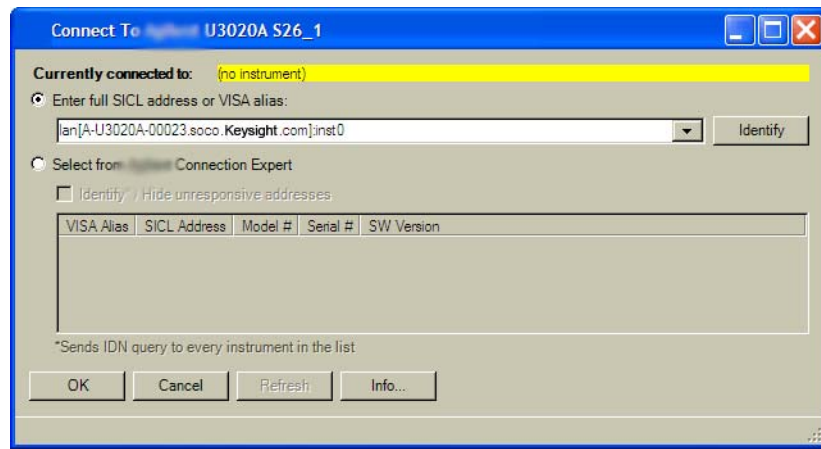
This button is *only* displayed if Switch Matrix is selected for the Multi-Lane Test Option field.

- 5 In the **Configure Switch Matrix Settings** dialog box, select **On** which is located at the top of the dialog box as shown in [Figure 52](#).
- 6 In the dialog box's **Controller** tab, select **Automatically select drivers and paths (limited models)**.
- 7 In the **Switch Drivers** field, click the **Models** drop-down list to select **Keysight U3020A S26**.
- 8 Click on the blank entry line shown in [Figure 52](#).
- 9 Click **Connect** to open the **Connect to Keysight U3020A S26** dialog box.



**Figure 52** Configure Tab Settings

- 10 In the dialog box, select **Enter full SICL address or VISA alias** and paste (**CTRL-V**) the SICL address into the field as shown in **Figure 53**.
- 11 Click **Identify** to confirm the connection.
- 12 Click **OK** to close the dialog box.

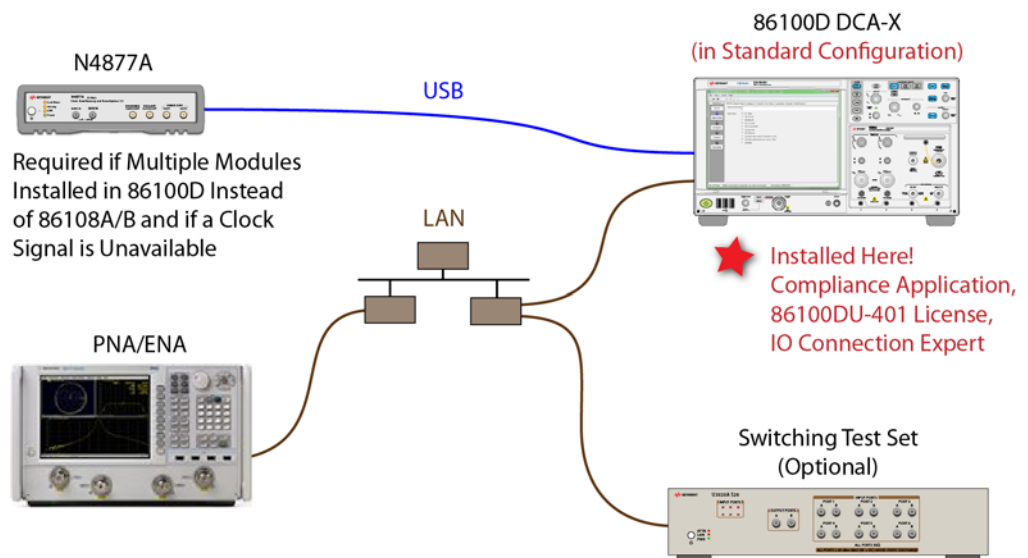


**Figure 53** Entering the Switching Test Set's Address

- 13 Refer to the application's Help system to learn how to configure the switch settings.

## 4 Installing N108xA on the 86100D

Follow the instructions in this chapter when you are installing both the compliance application and the FlexDCA application on the 86100D. Although a version of the 86100DU-401 software is automatically installed with the compliance application, you must purchase and install a license for the 86100DU-401.



**Figure 54** Compliance Application Installed on 86100D

**NOTE**

If you do not connect a network analyzer, you will not be able to perform the return-loss tests.

## Step 1. Connect the Equipment

- 1 Install one of the module combinations listed in [Table 5](#) into the 86100D.
- 2 Connect the equipment as shown in [Figure 54](#) on page 55 and turn on all of the instruments.

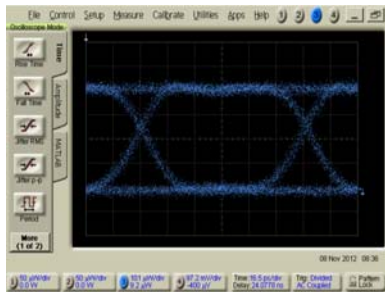
**Table 5** 86100D Module Solutions

Installed Module Configurations	Single Plug-In Module Setup	Multiple Plug-In Module Setup	Description
86108A/B	√		The 86108B can have either options LBW or HBW plus 216 or 232.
N1045A, 86117A, or 86118A-H01 86107A (any option) N4877A-216/232*		√	N4877A-216 provides a maximum data rate of 16 Gb/s. Option 232 provides a maximum data rate of 32 Gb/s.

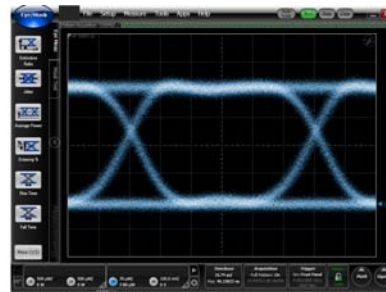
\* If you have access to the clock for the device, you can connect the clock to the 86100D's Trigger input *instead* of using the N4877A.

## Step 2. Place the 86100D in Standard Configuration

- 1 Start the 86100D.
- 2 If the 86100D's Legacy GUI is visible, click **File** > **Exit** to exit the GUI and view the Windows desktop.



86100D Legacy Configuration



86100D Standard Configuration

**Figure 55** 86100D User Interfaces

- 3 On the Windows Start menu, click **All Programs** > Keysight **FlexDCA** > Keysight **FlexDCA**.
- 4 Minimize the 86100D's graphical user interface so that you can see the Windows desktop.



## Step 3. Install the I/O Library Suite

- 1 In your internet browser, go to [www.keysight.com/find/iosuite](http://www.keysight.com/find/iosuite) and download the Keysight I/O Library Suite.



### NOTE

Keysight's I/O Library Suite is free software that automatically detects instruments connected to your PC and configures the interfaces. It reduces system setup and configuration time. The compliance application requires Keysight I/O Libraries Suite 16.3 or higher.

---

- 2 Install the I/O Library Suite on the same 86100D where you will install the compliance application.

## Step 4. Install the Compliance Application

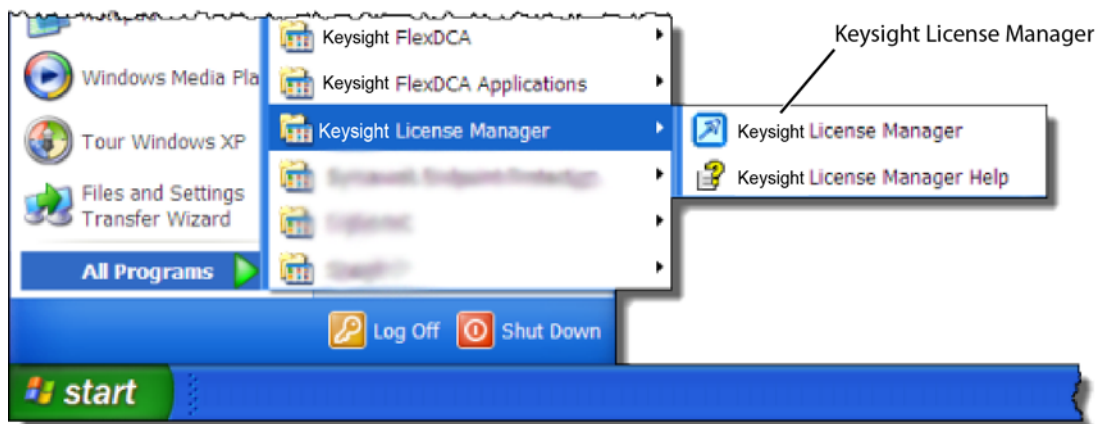
The following steps install the compliance application and its license as well as the license for the 86100DU-401. A version of the 86100DU-401 is automatically installed for use with the compliance application.

- 1 Go to [www.keysight.com](http://www.keysight.com) and search for and download the compliance application. Install the application on the specific 86100D for which you redeemed the license.

### NOTE

When you redeemed a compliance application license, you selected to install the application either on a specific 86100D or a specific PC.

- 2 Place the license file that you received from Keysight in a folder or accessible memory device.
- 3 If not already done, purchase an 86100DU-401 license. Place the license file that you received from Keysight in a folder or accessible memory device.
- 4 On the Windows start menu, locate the Keysight License Manager and start it.

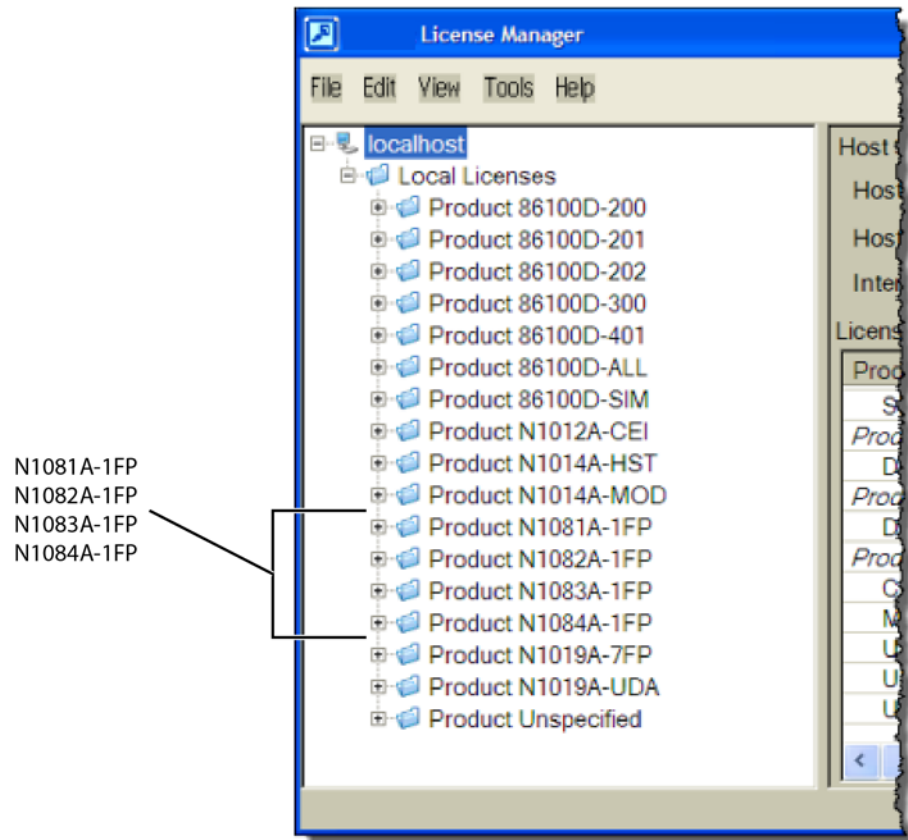


**Figure 56** License Manager in Windows Start Menu

- 5 In the Keysight License Manager, select and right click the compliance application listing and click **Install**. If the compliance application is not listed, click **File > Install**.
- 6 In the **Install License File(s)** dialog box, locate your license file and click **Open**. You may have up four licenses: N1081A, N1082A, N1083A, and N1084A as shown in [Figure 57](#) on page 59.

### NOTE

If you are using one of the switching test sets (switch matrix), you will also need one of the N1081A-7FP, N1082A-7FP, N1083A-7FP, or N1084A-7FP licenses.



**Figure 57** N1081A-Series Application Licenses in Keysight License Manager

**NOTE**

If you plan to run all of the application's IEEE 802.3 Ethernet KR/CR tests, you will need install one each of the N1081A, N1082A, N1083A, and N1084A licenses.

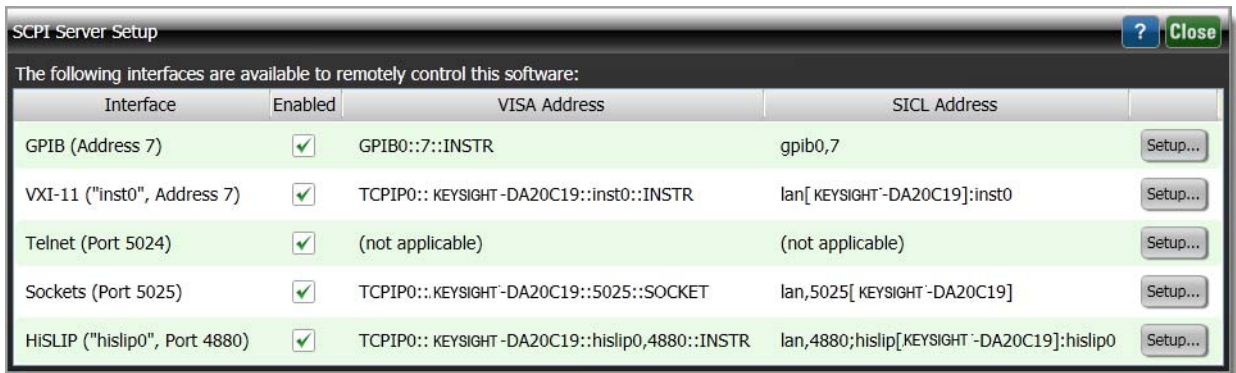
- 7 Select and install the 86100DU-401 license.
- 8 Close the Keysight License Manager.

## Step 5. Configure 86100D's SCPI Server Setup

- 1 On the 86100D, click **Help > About** and locate the System Information field in the dialog box. Scroll the field to view the **Computer Name** entry. You can also obtain the computer name from the Windows System properties.
- 2 Record the Computer Name (host name) as you will need this name later in this procedure.

86100D Computer Name: \_\_\_\_\_

- 3 Close the dialog box.
- 4 click **Tools > SCPI Programming Tools > SCPI Server Setup** to open the dialog box.
- 5 Confirm that the **Sockets** and **HiSLIP** interfaces are selected (Enabled) as shown in **Figure 58**.
- 6 Close the dialog box.



**Figure 58** FlexDCA's SCPI Server Setup Dialog Box

- 7 Minimize the FlexDCA application *and* the 86100D application so that you can view the Windows desktop.

## Step 6. Add 86100D to Keysight Connection Expert

- 1 On the PC's Windows Start menu, click Keysight **IO Libraries Suite** > Keysight **Connection Expert** and wait for the Keysight Connection Expert to open.

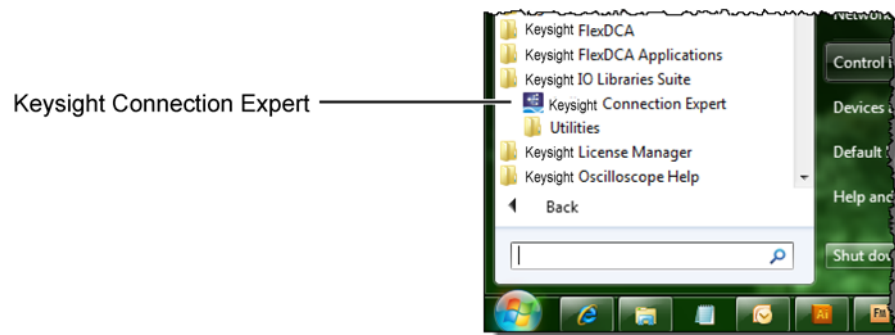


Figure 59 Starting Connection Expert in Windows Start Menu

- 2 In Keysight Connection Expert, click the **LAN** interface identified in Figure 60. Then, click **Add Instrument** on the toolbar.

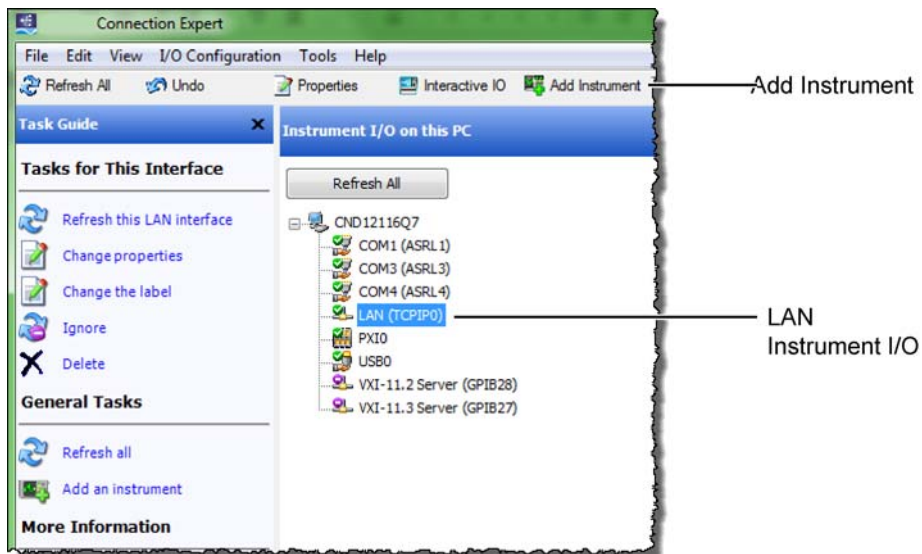
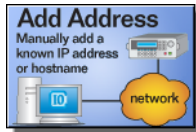
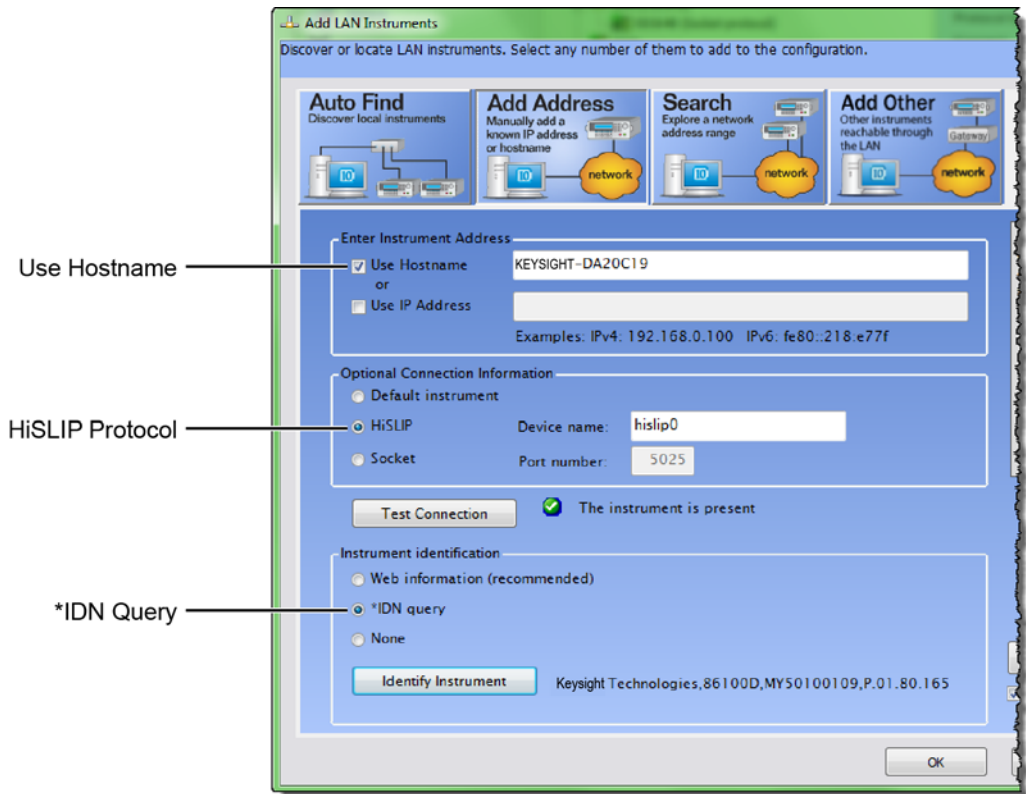


Figure 60 Adding 86100D

- 3 In the **Add LAN Instruments** dialog box, click the **Add Address** button to add the 86100D.



- 4 In the Enter Instrument Address field, select **Use Hostname** and enter the 86100D's computer name that you recorded in **step 2** on page 60. **Figure 61** shows an example of this dialog box with the settings configured.
- 5 In the **Optional Connection Information** field, select **HiSLIP**. The **Device Name** should be listed as **hislip0**. FlexDCA uses the HiSLIP protocol.
- 6 In the **Instrument identification** field, select **\*IDN query**.
- 7 To confirm your settings, click the **Test Connection** and **Identify Instrument** buttons.
- 8 Click **OK** to close the dialog box.



**Figure 61** Add LAN Instrument Settings (*Your Hostname entry will be different!*)

- 9 The **86100D (HSLIP protocol)** connection is now listed as shown in **Figure 62 on page 63**.

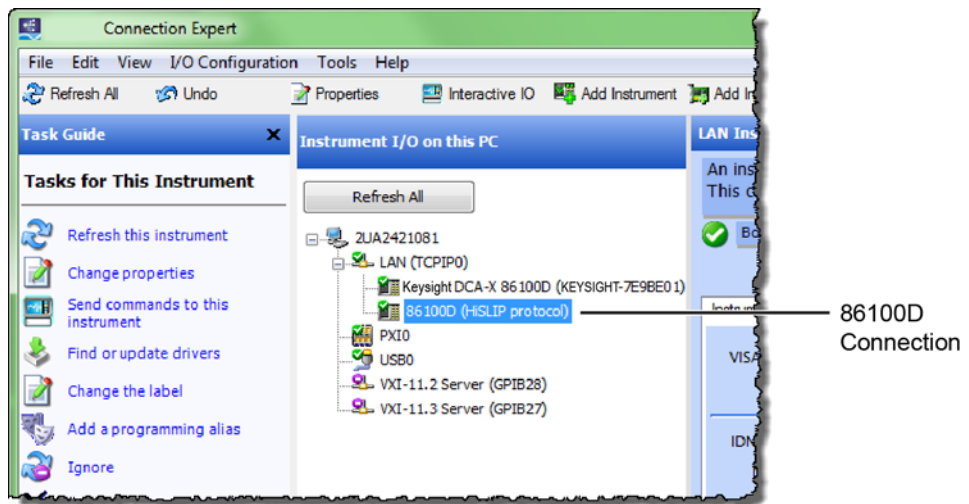


Figure 62 86100D (HSLIP protocol) Connection

## Step 7. Add ENA Network Analyzer to Keysight Connection Expert

An ENA or PNA network analyzer is required to perform the return loss tests.

**NOTE**

If you are using a PNA instead of an ENA network analyzer, skip these steps and continue with “**Step 8. Add PNA Network Analyzer to Keysight Connection Expert**” on page 66.

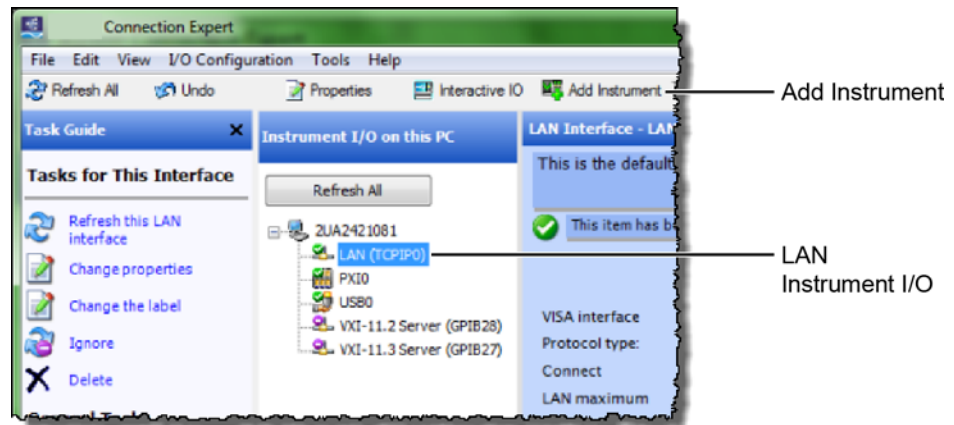
**NOTE**

A connection is established to an ENA using the LAN protocol.

- 1 Locate the ENA instrument’s Hostname (Full Computer Name) and record it on the following line. Refer to the network analyzer’s documentation for locating this information.

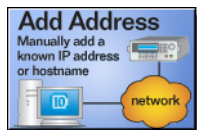
Hostname: \_\_\_\_\_

- 2 On the PC, view the Keysight Connection Expert, and click the **LAN** I/O interface identified in **Figure 63**. Then, click **Add Instrument**.



**Figure 63** Adding the ENA

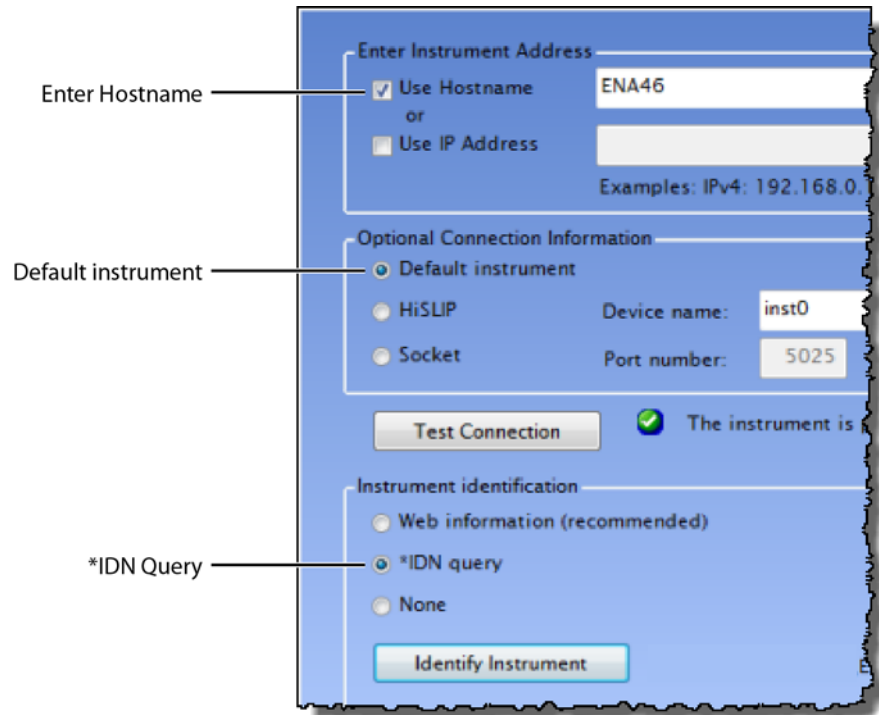
- 3 In the **Add LAN Instruments** dialog box, click the **Add Address** button to add the network analyzer.



- 4 In the **Enter Instrument Address** field, enter the **Hostname** of the network analyzer that you recorded above. **Figure 64** on page 65 shows an example of this dialog box with the proper settings.
- 5 In the **Optional Connection Information** field, select **Default instrument**.



- 6 In the **Instrument identification** field, select **\*IDN** query.
- 7 To confirm your settings, click the **Test Connection** and **Identify Instrument** buttons.
- 8 Click **OK** to close the dialog box.



**Figure 64** Connection Settings for ENA Network Analyzer (*Your Hostname entry will be different!*)

- 9 Continue with **“Step 9. Add N4877A to Keysight Connection Expert”** on page 68.

## Step 8. Add PNA Network Analyzer to Keysight Connection Expert

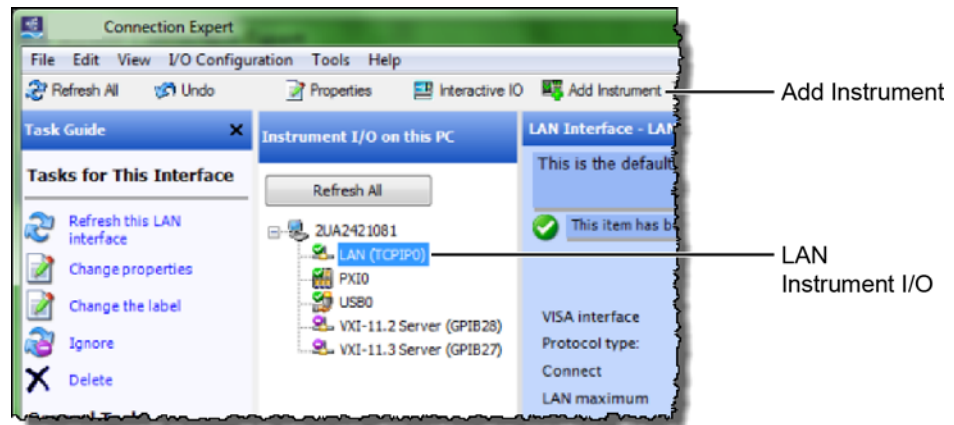
**NOTE**

A connection is established to a PNA using the sockets protocol.

- 1 If you already connected an ENA network analyzer, skip these steps and continue with **“Step 9. Add N4877A to Keysight Connection Expert”** on page 68.
- 2 Locate the PNA instrument’s IP address and record it on the following line. Refer to the network analyzer’s documentation for locating this information.

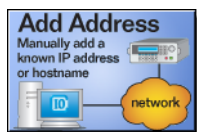
IP Address: \_\_\_\_\_

- 3 On the PC, view the Keysight Connection Expert, and click the **LAN I/O** interface identified in **Figure 65**. Then, click **Add Instrument**.



**Figure 65** Adding the PNA

- 4 In the **Add LAN Instruments** dialog box, click the **Add Address** button to add the network analyzer.



- 5 In the **Enter Instrument Address** field, enter the **IP address** of the network analyzer that you recorded above. **Figure 66** on page 67 shows an example of this dialog box with the proper settings.
- 6 In the **Optional Connection Information** field, select **Socket**.
- 7 In the **Instrument identification** field, select **\*IDN** query.
- 8 To confirm your settings, click the **Test Connection** and **Identify Instrument** buttons.
- 9 Click **OK** to close the dialog box.

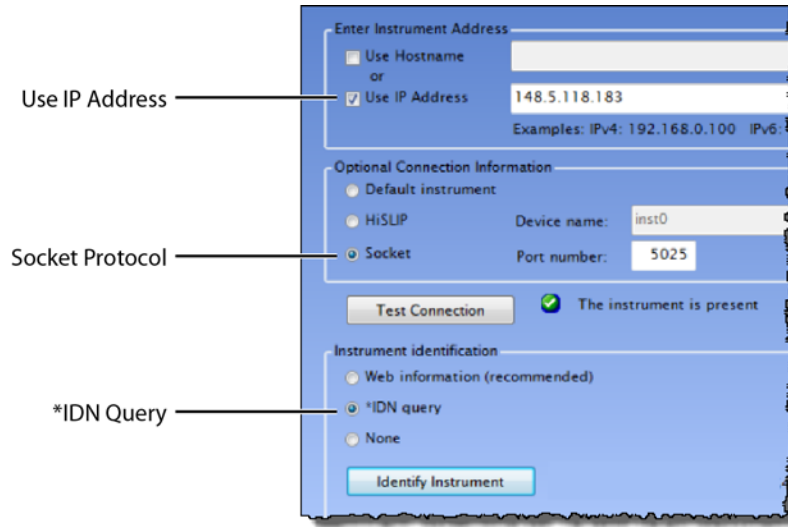
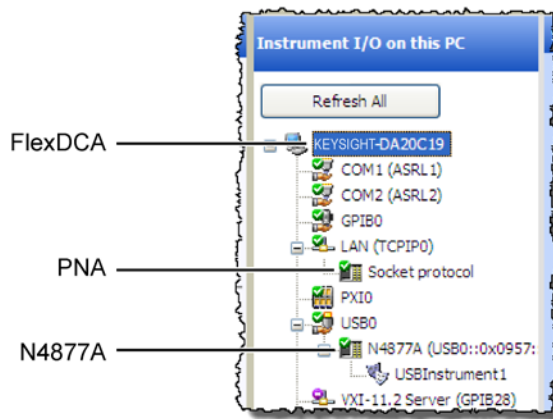


Figure 66 Connection Settings for PNA Network Analyzer (Your IP Address entry will be different!)

## Step 9. Add N4877A to Keysight Connection Expert

The N4877A is required in dual-module test setups. If you are using an 86108A/B module, skip this step.

If the N4877A is connected in your test setup via USB, Keysight Connection Expert should automatically detect the connection. If the N4877A is connected using the LAN, add it to Keysight Connection Expert.



**Figure 67** Example Keysight Connection Expert Connections

## Step 10 (Optional). Add Switching Test Set to Keysight Connection Expert

The compliance application supports Keysight's U3020A S26 switching test set and the BitifEye BIT 2100. The following steps illustrate connecting to an Keysight U3020A S26.

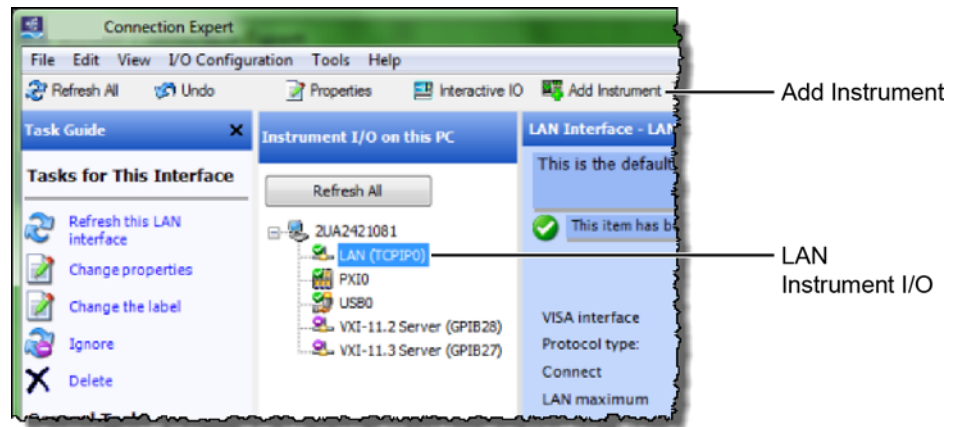
### NOTE

To use a switching test set (switch matrix), you must first install one of the N1081A-7FP, N1082A-7FP, N1083A-7FP, or N1084A-7FP application licenses.

- 1 Locate the switching test set's IP address and record it on the following line. Refer to the instrument's documentation for locating this information.

IP Address: \_\_\_\_\_

- 2 Open the Keysight Connection Expert.
- 3 In Keysight Connection Expert, right click on the **LAN** I/O interface identified in [Figure 68](#). Then, click **Add Instrument**.

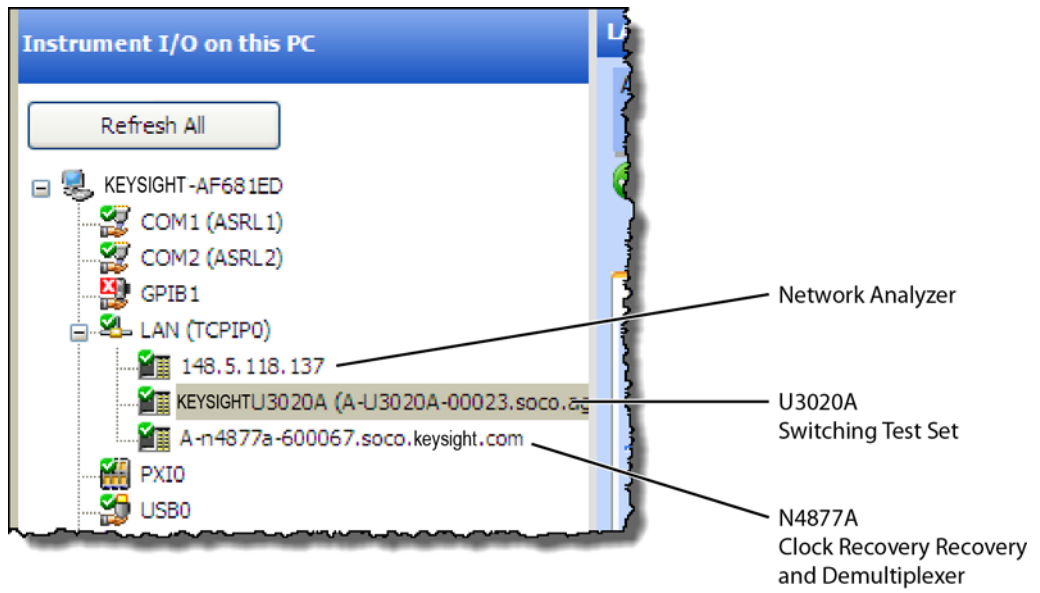


**Figure 68** Adding FlexDCA

- 4 In the **Add LAN Instruments** dialog box, use the Auto Find feature to locate and select the switching test set. Click **OK** to close the dialog box.



- 5 The connection to the switching test set should now be shown in Keysight Connection Expert as shown in [Figure 69](#).



**Figure 69** Connection Established for Switching Test Set, Network Analyzer, and Optional N4877A

## Step 11. Start the Compliance Application

- 1 Click **Apps** > **Automated Test Apps** > **N108xA IEEE802.3 Test App**.
- 2 If a dialog box appears, click **OK** to close it.

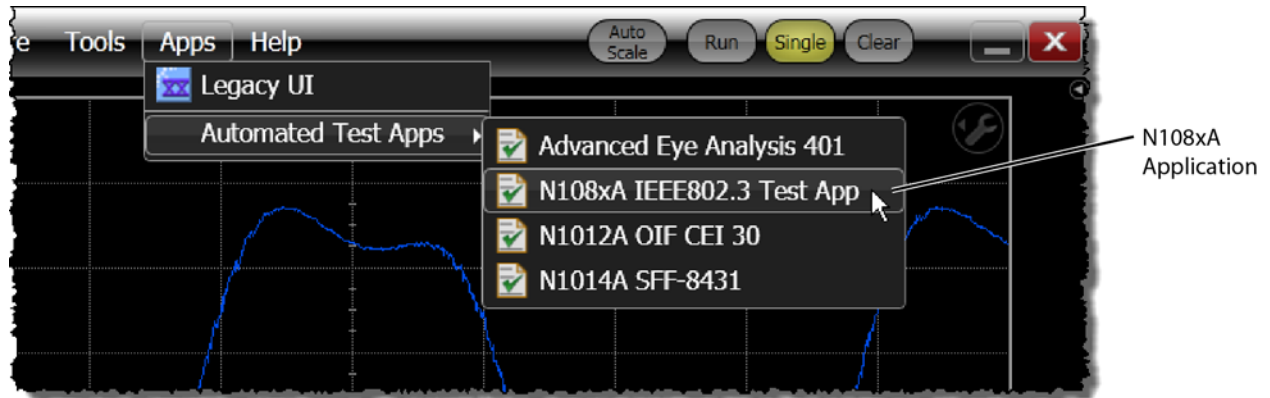


Figure 70 Starting the N1081A-Series Application From the 86100D Menu

## Step 12. Connect to the ENA Network Analyzer

### NOTE

If you are using a PNA instead of an ENA network analyzer, skip these steps and continue with “[Step 13. Connect to the PNA Network Analyzer](#)” on page 73.

- 1 In the compliance application’s **Set Up** tab, select **ENA** for the network analyzer and then click **Connect PNA/ENA**.

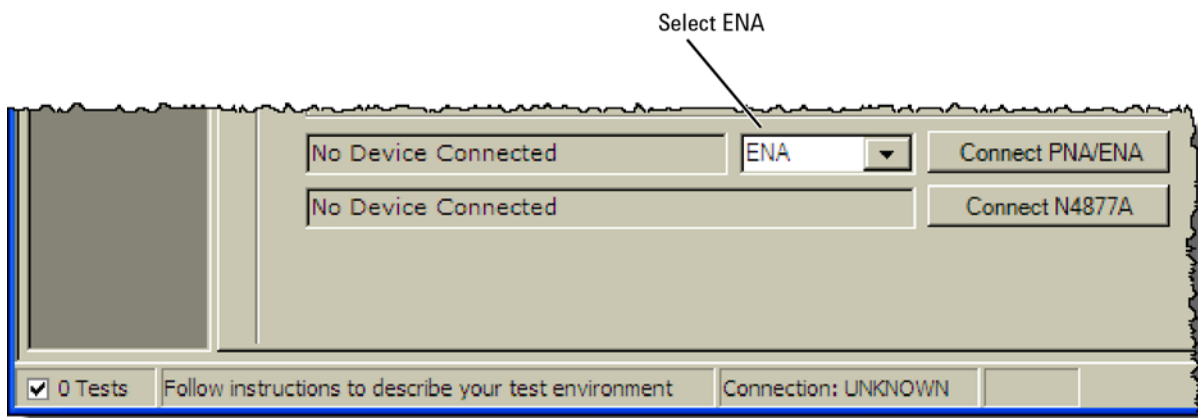
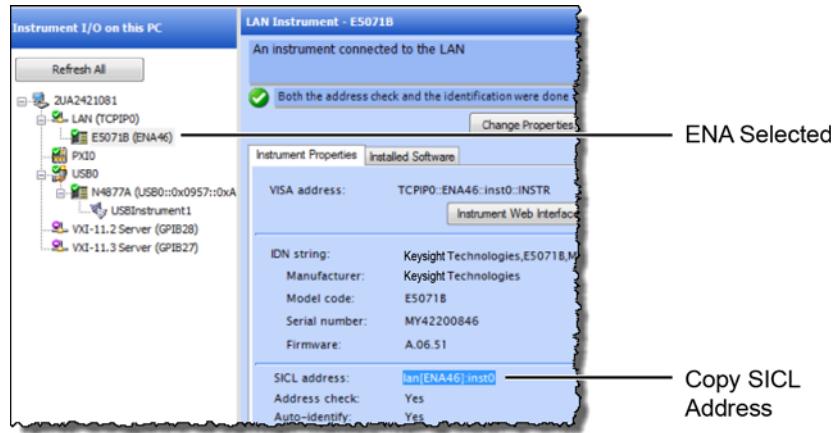


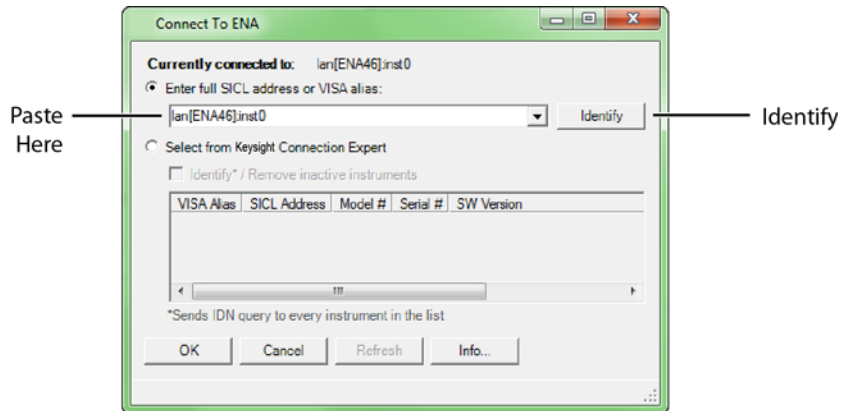
Figure 71 Selecting an ENA Network Analyzer

- Go to the Keysight Connection Expert, click on the ENA listing, and copy (**CTRL-C**) the SICL address that is shown in **Figure 72**.



**Figure 72** Copy ENA's SICL Address

- Return to the compliance application.
- Select **Enter full SICL address** and paste (**CTRL-V**) the SICL address into the field as shown in **Figure 73**.
- Click **Identify** to confirm the connection.
- Click **OK** to close the dialog box.



**Figure 73** SICL Address Pasted into Dialog Box

- Continue with **"Step 14. Connect to the N4877A"** on page 75.

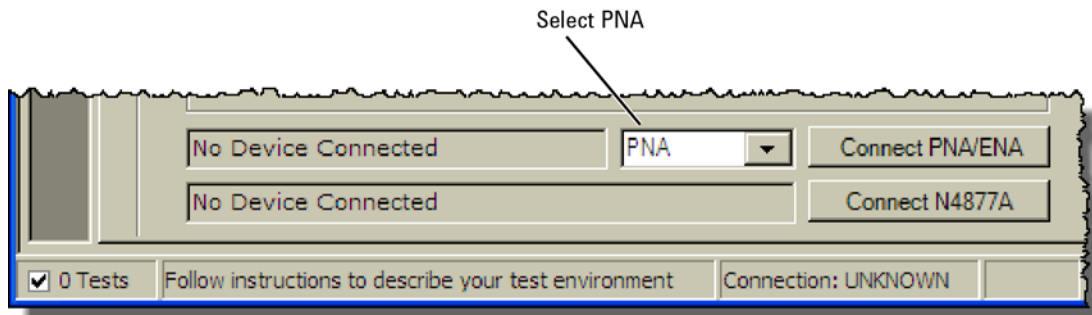


## Step 13. Connect to the PNA Network Analyzer

### NOTE

If you already connected an ENA network analyzer, skip these steps and continue with “[Step 14. Connect to the N4877A](#)” on page 75.

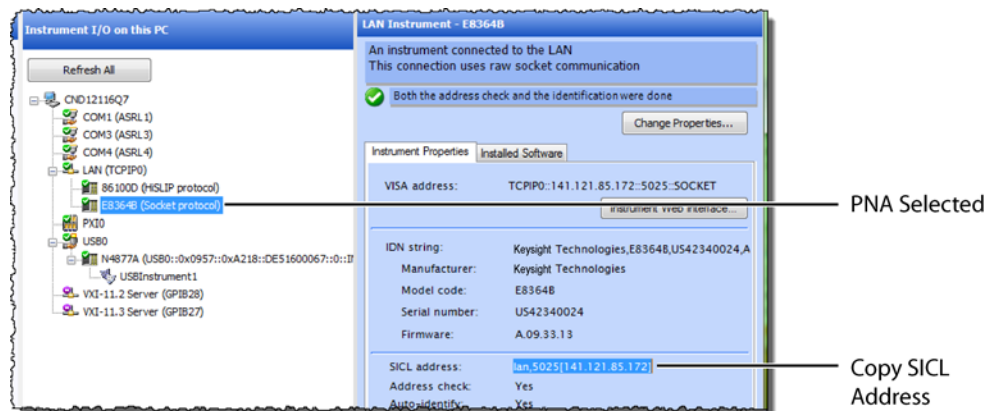
- 1 In the compliance application’s **Set Up** tab, select **PNA** for the network analyzer and then click **Connect PNA/ENA**.



**Figure 74** Selecting an PNA Network Analyzer

- 2 Go to the Keysight Connection Expert, click on the PNA listing, and copy (**CTRL-C**) the SICL address that is shown in [Figure 75](#).

Notice that this LAN address for the PNA has the form `lan,5025[IP address]`.



**Figure 75** Copy PNA’s SICL Address

- 3 Return to the compliance application.
- 4 Select **Enter full SICL address or VISA alias** and paste (**CTRL-V**) the SICL address into the field as shown in [Figure 76](#).
- 5 Click **Identify** to confirm the connection.
- 6 Click **OK** to close the dialog box.

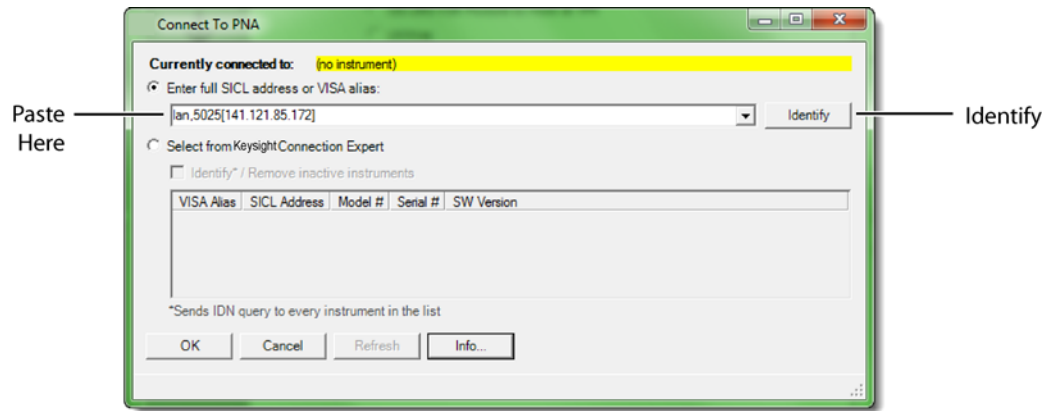


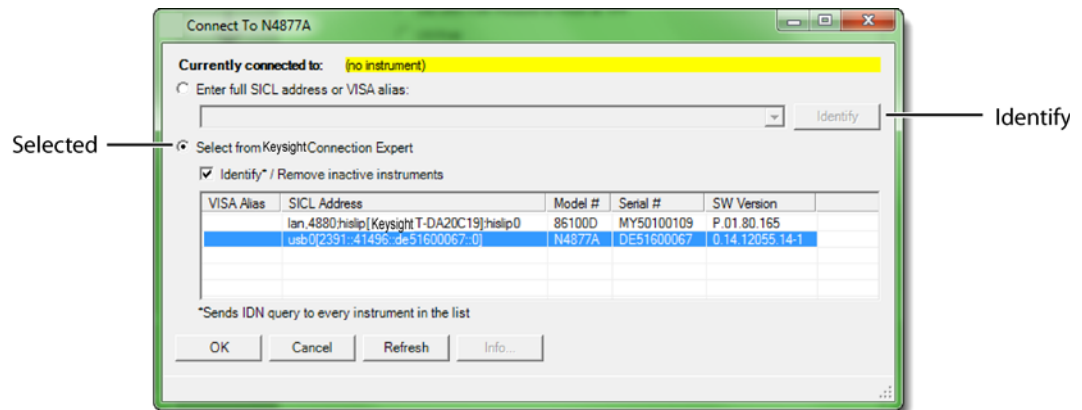
Figure 76 SICL Address Pasted into Dialog Box

## Step 14. Connect to the N4877A

### NOTE

Skip this step if your test setup uses an 86108A/B module. The N4877A Clock Data Recovery & Demultiplexer is used whenever two 86100D modules are used in the test setup rather than an 86108A/B module. Refer to [Table 5](#) on page 56.

- 1 In the compliance application's **Set Up** tab, click the **Connect N4877A** button that is located at the bottom of the window.
- 2 Enter the full SICL address or VISA alias. Or, select **Select from Keysight Connection Expert** as shown in [Figure 77](#).
- 3 Click **Identify** to confirm the connection.



**Figure 77** N4877A Selected from Connection Expert

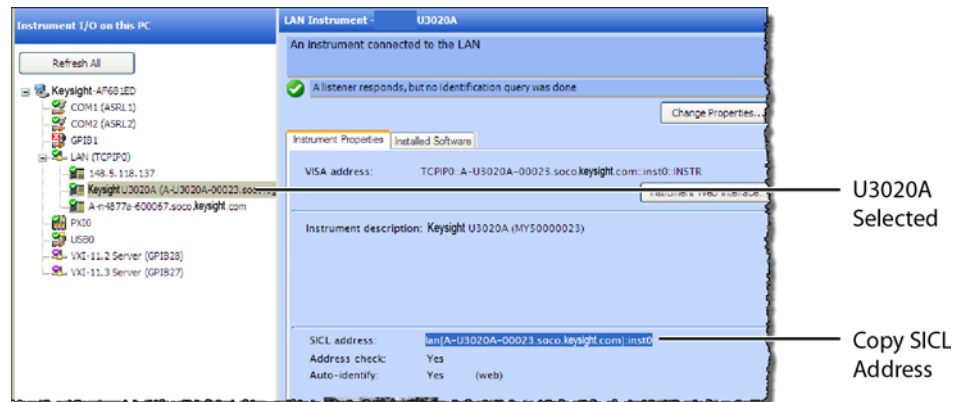
- 4 Click **OK** to close the dialog box.

## Step 15. Connect to the Optional Switching Test Set

### NOTE

This section shows how to connect the optional Keysight U3020A S26 Switching Test Set. Connecting a BitEye BIT 2100 would be similar.

- 1 Go to the Keysight Connection Expert, click on the switching test set listing as shown in [Figure 78](#).
- 2 Right click the SICL address and select copy.



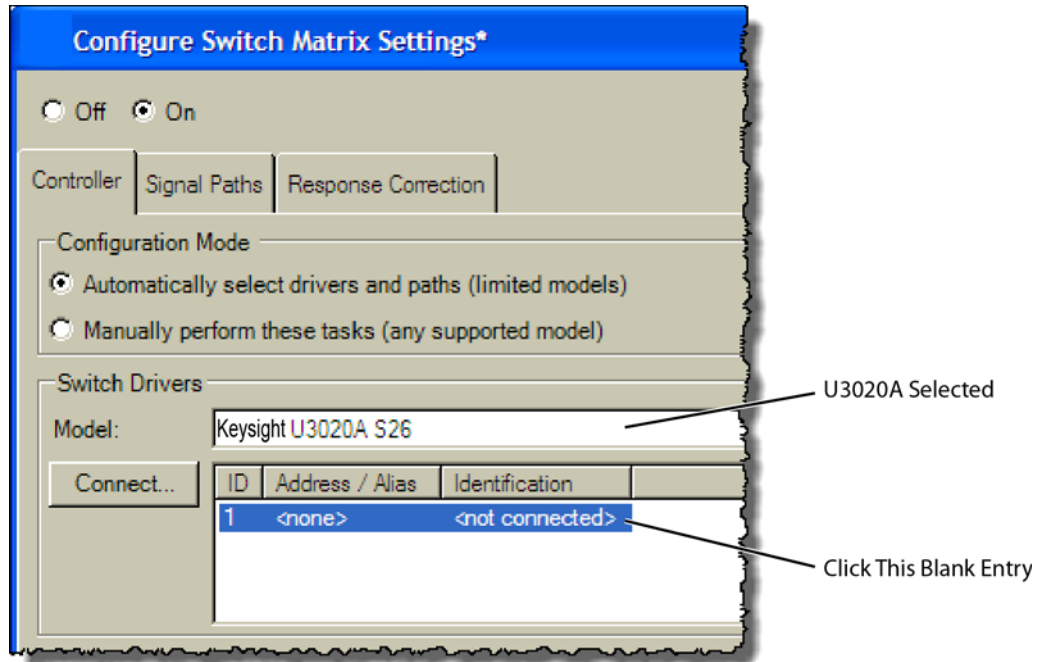
**Figure 78** Copy Switching Test Set's SICL Address

- 3 Return to the compliance application.
- 4 In the compliance application's **Set Up** tab, click the **Switch Matrix Setup** button that is located at the bottom of the window.

### NOTE

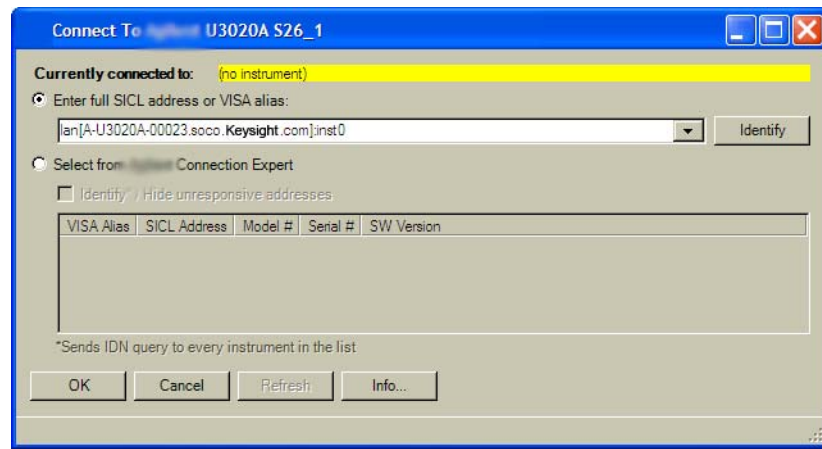
This button is *only* displayed if Switch Matrix is selected for the Multi-Lane Test Option field.

- 5 In the **Configure Switch Matrix Settings** dialog box, select **On** which is located at the top of the dialog box as shown in [Figure 79](#).
- 6 In the dialog box's **Controller** tab, select **Automatically select drivers and paths (limited models)**.
- 7 In the **Switch Drivers** field, click the **Models** drop-down list to select **Keysight U3020A S26**.
- 8 Click on the blank entry line shown in [Figure 79](#).
- 9 Click **Connect** to open the **Connect to Keysight U3020A S26** dialog box.



**Figure 79** Configure Tab Settings

- 10 In the dialog box, select **Enter full SICL address or VISA alias** and paste (**CTRL-V**) the SICL address into the field as shown in **Figure 80**.
- 11 Click **Identify** to confirm the connection.
- 12 Click **OK** to close the dialog box.



**Figure 80** Entering the Switching Test Set's Address

- 13 Refer to the application's Help system to learn how to configure the switch settings.

## 4 Installing N108xA on the 86100D